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ANNUAL REPORT OF THE MUNICIPAL BOARD OF THE CITY OF MANILA



FISCAL YEAR ENDED
JUNE 30, 1906

MANILA
BUREAU OF PRINTING
1906

47014

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OF THE CITY OF MANILA

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LETTER OF SUBMITTAL.

MUNICIPAL BOARD, CITY OF MANILA,
Manila, P. I., August 27, 1906.

SIR: In compliance with the provisions of the Charter of the city of Manila, the Municipal Board hereby submits the fifth annual report of the operations of the government of the city for the fiscal year ending June 30, 1906.

Respectfully submitted.

FELIX M. ROXAS,
President.

For P. G. McDONNELL,
MIGUEL VELASCO,
ROBT. G. DIECK,
A. W. HASTINGS,
Members.

The SECRETARY OF FINANCE AND JUSTICE.

Manila Municipal Board.

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REPORT OF THE MUNICIPAL BOARD OF THE CITY OF MANILA FOR THE FISCAL YEAR ENDING JUNE 30, 1906.

OFFICE OF THE SECRETARY.

There have been two changes in the personnel of the Board. On September 18, 1905, Mr. Arsenio Cruz Herrera resigned the presidency, and on September 19 Mr. Felix M. Roxas, formerly judge of the Court of Customs Appeals, was appointed to fill the vacancy. On November 4 Mr. C. H. Sleeper, having been appointed Director of Lands, resigned his position as a member of the Board, and Mr. A. W. Hastings, formerly city assessor and collector, was appointed on November 14 to fill the vacancy.

By resolution of November 21 the Board reduced its various committees from three members to one member, and in pursuance thereof the president named the following committees, which have remained unchanged:

Committee.	Member.	Committee.	Member.
Law-----	Roxas.	New sewer and waterworks systems.	Roxas.
Engineering and public works-----	McDonnell.	Health-----	Do.
Police-----	Do.	Advisory Board-----	Velasco.
Education-----	Roxas.	Markets and matadero-----	Do.
Fire-----	McDonnell.	Expropriation of lands-----	Do.
Electrical installation and illumination.	Do.	Transportation and sanitation-----	Hastings.
Finance and taxation-----	Hastings.	Licenses-----	Do.

Two hundred and ninety-nine sessions of the Board were held and 2,863 different items of municipal business considered and acted upon, of which 36 were referred to the Advisory Board for its consideration and advice. In addition to these, 49 other matters, mainly suggestions, recommendations, and complaints, were received from the Advisory Board and given due consideration. In addition to the large number of routine papers submitted for approval, such as requisitions for supplies and for printing, applications for licenses, etc., 7,371 letters were received and 8,764 formal letters sent.

The Board executed 24 leases, entered into 31 contracts, and passed 9 ordinances. Proposed ordinances to the number of 6 are under consideration, but definite action thereon has not been taken.

Ordinances enacted by the Municipal Board during the fiscal year 1906.

No.	Object.	Date of enactment.
76	Amendment to No. 15, Provost-Marshal-General, regulating the sale of food and drink	Sept. 11, 1905
77	Closing places of public amusement not later than 12.30 midnight	Oct. 12, 1905
78	Building ordinance	Dec. 19, 1905
79	Amending No. 46, monthly reading of water meters by inspectors	Jan. 2, 1906
80	Amending No. 28, to prevent removal of landmarks, etc.	Feb. 5, 1906
81	Regulating street railways and defining their obligations	Mar. 24, 1906
82	Amending No. 78, permit projections on streets of 8 meters	Mar. 30, 1906
83	Amending No. 42, relating to pawnbrokers	June 19, 1906
85	An ordinance relating to city water supply	June 30, 1906

PROPOSED ORDINANCES.

The following proposed ordinances are under consideration: Plumbing ordinance; regulating the use and repair of boilers, engines, and motors; amending No. 78, Building Code; regulating city water supply and service; Sanitary Code; licenses and permits.

On August 17 the contract between the city and the San Juan de Dios Hospital for the care and treatment of the indigent sick was divided, and now instead of the city maintaining 100 beds at the San Juan de Dios Hospital, as formerly, but 50 are maintained there, and another 50 maintained at St. Paul's Hospital. Under these two contracts the indigent sick of the city are cared for at a cost to the city of ₱1.40 per day for each patient.

A contract was entered into April 27 with the Hospicio de San José, under which juvenile offenders sentenced by the municipal court and by the Courts of First Instance are cared for, fed, clothed, and instructed to their physical, mental, and moral betterment, at a cost to the city of ₱0.40 each per day. A department of this institution is operated as a reform school, thus supplying a very much needed municipal want. Lists of those sent to the hospitals and to the reform school, showing in detail the cost to the city, and giving other statistical information respecting city patients and youthful wrongdoers, are submitted:

Care of indigent sick.

	San Juan de Dios Hospital.	St. Paul's Hospital.
Admitted by police	298	282
Admitted by Bureau of Health	201	583
Admitted by Municipal Board	6	5
Total	505	870
Cost by months:		
July	₱4,076.80	₱218.40
August	3,932.60	1,617.00
September	2,371.60	2,170.00
October	2,170.00	2,100.00
November	2,100.00	2,160.20
December	2,170.00	2,170.00
January	2,170.00	1,825.60
February	1,960.00	2,170.00
March	2,170.00	2,090.20
April	2,100.00	2,135.00
May	2,170.00	2,100.00
June	2,100.00	
Total cost for the year	29,491.20	20,756.40

Minors sent to San José: First case sent February 13, 1906; sent in February, 10; March, 14; April, 9; May, 12; June, 9—a total of 54, at a total cost of ₡1,476.80. Number of males, 49; females, 5; total, 54. Average age, 13 years 4 months.

There having been no one office charged particularly with the duty of keeping the records of the large, varied, and scattered real properties of the city, the Secretary of the Board was directed by resolution of June 27 to prepare a list of all real estate of the city, with all data available, and submit the same to the Board. This work has been completed and there is now in the office a book showing complete statements of all city properties, with their respective assessed valuations, and the uses to which they are being put, together with a plan of each piece of property, giving the dimensions, area, and assessed valuation. The book, like all the other records of the office, is open to the public.

The assessed valuation of the real estate owned by the city is shown to be ₡7,412,875.16, and the uses to which it is being put and the municipal district in which it lies are shown by the following table:

Assessed valuation of city property.

School department	₡161,093.33
Fire department	217,429.22
Police department	46,773.92
Sanitation and transportation, including city stables, crematories, etc	288,034.13
Parks	3,377,699.40
Markets and matadero	1,113,472.15
Engineering department and city shops.....	160,723.25
For administrative purposes (City Hall)	154,246.00
By municipal cemeteries	305,706.11
Insular Government	860,100.98
United States Army	95,418.00
Rented	116,620.84
Unoccupied	515,557.83

Total value of real property belonging to the city..... 7,412,875.16

DISBURSING OFFICE.

The disbursing officer, Mr. R. C. Baldwin, has effected many changes in the system of paying city employees within the past year, and all “for the good of the service.”

It was no unusual sight to see hundreds of city laborers standing about the City Hall on pay days, many of them accompanied by wife and children, waiting to receive their monthly wages. Now very few are seen there for that purpose; and why? Because the disbursing officer, with his assistant, goes into all parts of the city with his pay rolls and money bags and pays the laborer at his place of work.

The result is much saving of time and expense to the city and to the individual and his family.

The disbursements for the fiscal year 1906 exceeded those of any previous year, aggregating ₱5,843,554.24. Of the above amount ₱1,634,728.14 was for permanent public improvements and the sum of ₱233,335.98 represents interdepartment transactions—that is, the earnings of one department of the city for the benefit and at the expense of some other department, such as transportation service and work done at the city shops. The actual ordinary or current expenses of the city cover the balance of the sum disbursed and amount to ₱3,975,490.12.

The following statements by the disbursing officer are herewith submitted for your further information:

*Recapitulation of expenditures from appropriations for the fiscal year ending
June 30, 1906.*

Department.	Salaries and wages.	Contingent expenses.	Tax refunds.	Public works.	Aggregate.
Municipal Board, Advisory Board, disbursing office, and public charities	₱90,177.00	₱114,494.00			₱204,671.00
Law	129,213.68	21,569.91			150,783.59
Fire	238,739.74	56,069.89			294,809.63
Engineering and public works	504,143.99	596,550.00			1,100,693.99
Sanitation and transportation	553,993.95	353,153.66			907,147.61
Sewer and waterworks construction	53,117.61	538,979.87			592,097.48
Assessments and collections	74,305.02	7,687.93	₱33,906.29		115,899.24
Police	1,097,536.57	58,392.80			1,155,929.37
City schools	255,570.42	16,942.00			272,512.42
Public works, city of Manila				₱782,610.58	782,610.58
Construction of extension to Luneta				260,020.08	260,020.08
Total	2,996,797.98	1,763,840.06	33,906.29	1,042,630.66	5,837,174.99

Disbursements by city disbursing officer and settlements by Insular Auditor	₱5,215,138.60
Supplies purchased from Insular Purchasing Agent	565,487.63
10 per cent surcharge paid on supplies purchased from Insular Purchasing Agent	56,548.76
Total	5,837,174.99

Summary of all expenditures during the fiscal year ending June 30, 1906.

Department.	From appropriations for fiscal year 1905.	From current appropriations.	Aggregate.
Municipal Board, Advisory Board, disbursing office, and public charities, including ₱41,655 for care of city prisoners confined in Bilibid Prison	₱157.74	₱204,671.00	₱204,828.74
Law	613.32	150,783.59	151,396.91
Fire	221.00	294,809.63	295,030.63
Engineering and public works	2,203.50	1,100,693.99	1,102,897.49
Sanitation and transportation		907,147.61	907,147.61
Sewer and waterworks construction		592,097.48	592,097.48
Assessments and collections	473.21	115,899.24	116,372.45
Police	2,451.48	1,155,929.37	1,158,380.85
City schools	259.00	272,512.42	272,771.42
Public works, city of Manila		782,610.58	782,610.58
Construction of extension to Luneta		260,020.08	260,020.08
Total	6,379.25	5,837,174.99	5,843,554.24

NOTE.—The item of "Public works" includes ₱199,693.47 for damages incident to opening, widening, and straightening of streets.

Monthly salary payments made during the fiscal year ending June 30, 1906.

Department.	1905.						1906.	
	July.	August.	Septem-ber.	October.	Novem-ber.	Decem-ber.	Janu-ary.	Febru-ary.
Municipal Board	38	34	41	37	38	37	39	35
Law	68	68	69	70	71	77	69	70
Fire	147	145	145	143	148	150	155	152
Engineering and public works	144	144	143	143	144	146	152	144
Sanitation and transportation	139	127	127	130	141	130	22	23
Sewer and waterworks construction	12	12	14	12	13	13	12	17
Assessments and collections	172	163	162	171	166	147		
Police	807	781	783	786	772	764	754	750
City schools	517	510	535	483	487	470	453	459
Public works								
Total	2,044	1,984	2,019	1,975	1,980	1,934	1,656	1,650
Average monthly payment	₱105.69	₱103.71	₱103.23	₱105.78	₱101.83	₱105.47	₱110.51	₱108.44

Department.	1906.				Total number of pay-ments.	Total amount of payments.	Average pay-ment.
	March.	April.	May.	June.			
Municipal Board	33	37	31	34	434	₱90,177.00	₱207.78
Law	68	71	68	65	834	129,213.68	154.93
Fire	151	143	143	143	1,765	238,739.74	135.26
Engineering and public works	139	131	128	131	1,689	224,057.77	132.66
Sanitation and transportation	21	20	22	20	922	113,561.07	123.17
Sewer and waterworks construction	14	13	15	13	160	50,950.80	318.44
Assessments and collections				1	982	74,305.02	75.67
Police	763	754	768	677	9,159	1,097,536.57	119.83
City schools	242	162	160	195	4,673	255,560.42	54.69
Public works	1	1	1	1	4	1,200.00	300.00
Total	1,432	1,332	1,336	1,280	20,622	2,275,302.07	110.33
Average monthly payment	₱124.81	₱126.59	₱123.48	₱122.10			

Daily wage payments made during the fiscal year ending June 30, 1906.

Department.	1905.						1906.	
	July.	August.	Septem-ber.	October.	Novem-ber.	Decem-ber.	Janu-ary.	Febru-ary.
Engineering and public works	1,360	1,328	1,287	1,395	1,338	1,218	1,234	1,094
Sanitation and transportation	1,366	1,289	1,376	1,412	1,405	1,394	1,469	1,435
Sewer and waterworks construction	2	126	374	982	1,289	1,030	578	166
Police	24	27	26	26	47	3	4	3
Public works	177	116	173	73	17	168	28	60
Total	2,929	2,886	3,236	3,888	4,046	3,813	3,313	2,758
Average monthly payment	₱21.98	₱23.74	₱21.06	₱19.68	₱20.29	₱19.02	₱24.81	₱25.56

Department.	1906.				Total number of pay-ments.	Total amount of payments.	Average monthly pay-ment.
	March.	April.	May.	June.			
Engineering and public works	1,076	1,198	1,196	978	14,702	₱350,288.34	₱23.83
Sanitation and transportation	1,446	1,417	1,400	1,171	16,580	440,450.88	26.57
Sewer and waterworks construction	246	90	179	97	5,109	55,491.24	10.86
Police	3	3	4	4	174	7,664.45	44.05
Public works	101	34	75	30	1,052	22,398.36	21.29
Total	2,872	2,742	2,854	2,280	37,617	876,293.27	23.30
Average monthly payment	₱28.01	₱25.84	₱27.55	₱26.97			

Expenditures for the care of city prisoners confined in Bilibid Prison during the fiscal year ending June 30, 1906.

Month.	Number of rations.			Cost of rations.		
	60-cent.	40-cent.	Total.	60-cent.	40-cent.	Total.
1905.						
July	771	8,334	9,105	P462.60	P3,333.60	P3,796.20
August	804	8,552	9,356	482.40	3,420.80	3,903.20
September	671	8,785	9,456	402.60	3,514.00	3,916.60
October	644	9,113	9,757	386.40	3,645.20	4,031.60
November	416	8,744	9,160	249.60	3,497.60	3,747.20
December	531	8,608	9,139	318.60	3,443.20	3,761.80
1906.						
January	594	7,456	8,050	356.40	2,982.40	3,338.80
February	355	6,080	6,435	213.00	2,432.00	2,645.00
March	408	6,821	7,229	244.80	2,728.40	2,973.20
April	512	7,468	7,980	307.20	2,987.20	3,294.40
May	376	7,664	8,040	225.60	3,065.60	3,291.20
June	378	6,823	7,201	226.80	2,729.20	2,956.00
Total	6,460	94,448	100,908	3,876.00	37,779.20	41,655.20

NOTE.—The 60-cent rations are for American and European prisoners and the 40-cent rations are for native and other Asiatic prisoners.

Comparative statement of disbursements by fiscal years since inauguration of the municipal government on August 7, 1901.

Department.	August 7, 1901, to June 30, 1902.	Fiscal year—			
		1903.	1904.	1905.	1906.
Municipal board, advisory board, disbursing office, and public charities	P124,188.04	P224,701.62	P224,460.87	P220,503.24	P204,671.00
Law	113,108.48	139,436.12	147,765.93	142,795.13	150,783.59
Fire	103,554.08	354,698.34	341,428.68	318,416.82	294,809.63
Engineering	1,412,707.40	1,741,118.37	2,517,881.94	1,979,299.35	1,100,693.99
Sanitation and transportation					907,147.61
Sewer and waterworks construction				5,743.28	592,097.48
Assessments and collections	189,028.46	161,053.94	171,756.30	168,014.46	115,899.24
Police	1,118,182.48	1,250,952.09	1,213,584.91	1,204,894.22	1,155,929.37
City schools	142,539.24	167,142.83	279,746.25	297,875.28	272,512.42
Public works			378,562.65	705,733.02	782,610.58
Luneta extension					260,020.08
Total	3,203,308.18	4,039,108.31	5,275,187.53	5,043,274.80	5,837,174.99

FINANCE.

Prior to the fiscal year 1905 the annual revenues of the city were sufficient to not only meet its share of the current expenses and provide liberally for public improvements but were also sufficiently large to show at the end of each year a substantial balance to carry forward to the next year, as shown by the following condensed statement of receipts and expenditures:

Condensed statement of collections, disbursements, and balances for the fiscal years 1902, 1903, 1904, and 1905.

Year.	Debit.	Amount.	Year.	Credit.	Amount.
1902	Disbursements ----- Balance June 30, 1902 -----	<i>U. S. currency.</i> \$1,526,485.15 48,052.19	1902	Collections ----- Insular Government, 30 per cent of withdrawals -----	<i>U. S. currency.</i> \$1,116,591.79 457,945.55
		1,574,537.34			1,574,537.34
1903	Disbursements ----- Balance June 30, 1903 -----	1,962,078.00 204,937.52	1903	Balance on hand July 1, 1902 ----- Collections for fiscal year 1903 ----- Insular Government, 30 per cent on \$1,961,361.83 -----	48,052.19 1,530,554.78 588,408.55
		2,167,015.52			2,167,015.52
1904	Disbursements ----- Balance June 30, 1904 -----	<i>Phil. currency.</i> ₱5,292,772.42 608,710.93	1904	Balance on hand July 1, 1903 ----- Collections for fiscal year 1904 ----- Insular Government, 30 per cent on ₱5,288,249.62 -----	<i>Phil. currency.</i> ₱409,875.04 3,905,133.42 1,586,474.89
		5,901,483.35			5,901,483.35
*1905	Disbursements -----	5,129,490.76	1905	Balance on hand July 1, 1904 ----- Collections for fiscal year 1905 ----- Insular Government, 30 per cent on ₱5,093,728.50 ----- Reimbursement by Bureau of Internal Revenue ----- Balance (deficit) -----	608,710.93 2,890,674.55 1,528,118.55 29,150.00 72,836.73
	Total -----	5,129,490.76		Total -----	5,129,490.76

*To balance due Government July 1, 1905, ₱72,836.73.

From the foregoing statement it will be observed that the expenditures for 1905 exceeded the current revenues and Government contribution by ₱681,547.66 and left a deficit of ₱72,836.73 to be brought forward in place of the usual substantial credit balance. So it may with reason be said that the year 1906 marked the beginning of a new condition of affairs from a financial standpoint. That is to say, the real effect of the new internal-revenue law reducing the revenues of the city ₱900,000 or more is for the first time fully realized. The estimate of revenues for 1906, based upon a 2 per cent tax levy on real estate for the calendar years 1905 and 1906, was less by nearly ₱200,000 than for 1905 and ₱960,000 less than for 1904, with large public improvements under way that must be carried on to completion.

In the face of these conditions, the Board reduced the estimates covering ordinary expenses by nearly ₱200,000 as compared with the amount expended the previous year, and was prepared for a still further reduction

by the Commission. Consideration by the Commission of the budget for 1906 was unavoidably delayed waiting the outcome of the report of the Reorganization Committee of the Insular Government, and it was not until December 15 that the city appropriation was determined. From July 1 to December 15 (nearly six months) expenditures continued on the basis of the appropriation for 1905.

The estimate as presented to the Commission called for a total appropriation of ₱5,341,000, not including sewer and waterworks construction, and anticipated an overdraft for the year of ₱242,611. This reduction was based upon estimated collections, ₱3,146,500, transfer from sewer and waterworks construction account, ₱359,889, and the usual 30 per cent contributions from the Insular Government, estimated at ₱1,592,000.

The tax upon real estate is levied by the calendar year and is payable in two installments, the first on or before June 30 and the second on or before December 31. Therefore, in calculating the revenues for a given fiscal year a part of two calendar years' taxes must be considered in estimating the receipts from this source.

As before stated, the estimate of collections was based upon a 2 per cent real estate tax levy for 1905 and 1906, but the Commission before taking up for consideration the expense budget, reduced, by Act No. 1420, the tax levy for the calendar year 1905, to $1\frac{1}{2}$ per cent; and this in the last month of the year in which the tax was due. The prospective revenues were thereby reduced ₱387,702 and the calculations of the Board seriously affected. Other items amounting to ₱102,000 were also stricken from the estimate. The expense estimates were scaled in like proportion with the result that Act No. 1421 appropriated the sum of ₱4,569,683, anticipating about the same deficit as did the original estimate.

That the actual deficit, as shown on balance sheet given below, is so much larger than was contemplated is almost wholly attributable to the following three causes:

(1) The debit balance at the beginning of the year was larger by nearly ₱50,000 than was first made to appear.

(2) The collections fell short of the amount estimated by ₱176,000.

(3) Extra allowances:

For new bridge	₱8,972
For street widening, etc.....	31,757
For public works, Act No. 1222.....	12,782
For Cuartel Meisic	18,000
Total extra for public works.....	71,511
Extra allowance to cover deficiency in law and police departments	69,236

Balance sheet June 30, 1906 (fiscal year 1906).

Debit.	Amount.	Credit.	Amount.
Balance due Government July 1, 1905.....	P72,836.73	Collections:	
Disbursements account fiscal year 1905.....	6,379.25	By city assessor and collector.....	P2,465,780.40
Disbursements account fiscal year 1906.....	5,245,077.51	By register of deeds.....	14,850.11
Transportation furnished Insular Government to apply on purchase of corral equipment.....	114,796.73	By disbursing officer.....	233,335.98
		By department of sanitation and transportation furnished Insular Government.....	114,796.73
		Sewer and waterworks construction account of transfer under Act No. 1422, 70 per cent of P358,322.47.....	250,825.73
		Insular Government, loan account of Luneta extension, 70 per cent of P260,020.08.....	182,014.05
		Insular Government, 30 per cent of P5,098,927.22.....	1,529,678.17
		Secretary Municipal Board, forfeit by San Nicolas Iron Works of deposit on contract.....	60.00
		Balance.....	647,749.05
Total.....	*5,439,090.22	Total.....	5,439,090.22

* To balance brought down, P647,749.05.

NOTE.—Sewer and waterworks construction account not included in the above.

The sum total disbursed during the fiscal year 1906, as appears in the foregoing statement, is..... P5,251,456.76
Deduct departmental transfers..... 233,335.98

Leaves the net expenditures..... 5,018,120.78

Classified as follows:

Permanent public improvements..... 1,042,630.66
Current expenses..... 3,975,490.12
Total..... 5,018,120.78

Had the appropriation been made earlier in the year it is believed a much more favorable showing could now be made. The economies that otherwise would have extended over the whole year were necessarily restricted to the half year following date of the appropriation.

Sewer and waterworks account.

Proceeds of sale of \$1,000,000 gold bonds of the issue of June 1, 1905, at \$1.095625; in Philippine currency..... P2,191,250.00
Expended fiscal year—

1905..... P5,743.28
1906..... 592,097.48

Total expended to June 30, 1906..... 597,840.76

Balance on hand June 30, 1906..... 1,593,409.24

A large share of this fund has been kept on deposit in New York at 4 per cent interest.

Act No. 1323 of the Philippine Commission authorized the issue, by the city of Manila, of \$4,000,000 of thirty-year 4 per cent nontaxable

gold bonds for the purpose of constructing sewers and furnishing the city with an adequate supply of water; \$1,000,000 of said bonds, as shown in the above statement, have already been issued and sold at a handsome premium, \$2,000,000 will be issued January 2, 1907, and the balance January 2, 1908, as provided by said Act No. 1323.

Real estate belonging to the city of Manila June 30, 1906, listed by districts.

Intramuros	₱1,364,173
Binondo	361,578
San Nicolas	869,424
Santa Cruz	434,146
Quiapo	100,033
San Miguel	12,569
Sampaloc	155,368
Tondo	330,320
Ermita	1,497,446
Malate	224,426
Paco	209,495
Pandacan	7,443
Santa Ana	536
Total	5,566,957

Nonexpendable personal property belonging to the city of Manila June 30, 1906, as invoiced and reported by the chiefs of departments.

Municipal Board	₱9,139.65
Disbursing officer of Municipal Board.....	4,298.42
Engineering and public works.....	463,272.78
Police	182,128.78
Fire	356,026.54
Assessment and collections	6,841.40
Schools	108,037.60
Law department	29,212.28
Sanitation and transportation	529,245.08
Total	1,688,202.53

Assets of the city of Manila.

Real estate as per above statement.....	₱5,566,957.00
Personal property	1,688,202.53
Accrued interest on money deposited in New York, estimated at.....	50,000.00
Internal revenue dividend for first quarter of 1906, estimated at.....	47,000.00
Insular Government for police service not yet adjusted.....	277,550.00
Internal revenue department for refunds to distillers erroneously charged city	986.01
Claim against San Lazaro estate for taxes against its land from 1901 to 1906, inclusive, estimated at.....	200,000.00
93 shares of the capital stock Banco Español-Filipino, at ₱300 per share (market value).....	28,200.00
Total	7,858,895.54

NOTE.—Assessed valuation of real estate subject to taxation, within the city of Manila, ₱80,525,235.

Liabilities of the city of Manila June 30, 1906.

Water and sewer bonds issue of June 1, 1905, under Act No. 1323.....	₱2,000,000.00
Balance due Insular Government on account of purchase of transportation equipment and corral.....	106,569.24
Due Insular Government on account of Luneta extension.....	182,014.05
Due Insular Government on general account.....	647,749.05
Total	2,936,332.34
70 per cent of unexpended balances of appropriations fiscal year 1906 and previous years (contingent).....	193,951.44

ESTIMATES, ETC., FISCAL YEAR 1907.

The estimated current or ordinary expenses for the ensuing year, as per estimates already in the hands of the honorable Commission, totalize in round figures.....	₱3,500,000
To this amount should be added to provide for sinking fund and interest on bonds, already appropriated.....	158,740
Also, first annual payment on Luneta extension.....	35,000
Total	3,693,740

A sum well within what we believe to be a conservative estimate of the city's revenues for the coming year, including, of course, the 30 per cent contribution by the Insular Government and less for current expenses by ₱475,000 than was appropriated last year for same.

We believe that the revenues will also provide for a substantial reduction of the present deficit, with expenses on above basis.

It will be observed that the above estimate makes no provision for permanent public improvements; a fact that is much to be regretted. That public works that inure to the permanent benefit of the city should go on, we are in hearty accord. The city must not stand still in this respect. Public improvements necessary to making Manila an up-to-date and attractive city should go steadily but conservatively forward, and it is our judgment that the city's revenues can be consistently increased so that a reasonable provision may be made each year for this purpose. To that end the Board makes the following suggestions, to wit:

The assessed valuation of real estate within the city of Manila is ₱80,525,000. The annual tax rate fixed by Act No. 183 is 20 mills; the rate thus far imposed has not exceeded 15 mills; a tax of 1 mill produces ₱80,525. The estimate of revenues for 1907 is based upon a 15 mills levy; increase this to 17 mills and the revenues would be augmented ₱161,000.

The cedula tax is uniform throughout the Islands, while in the larger cities, especially in Manila, the taxpayer enjoys benefits which do not extend to those living in the provinces. A very large majority pay no other tax and it appears to us no more than right and just that a

larger contribution should be made toward paying the many expenses incident to the maintenance of a large city. The increase of this tax to ₱2, which we recommend, would yield approximately an additional ₱50,000.

Increasing the fee for the registration of live stock, as already recommended by the Board, would probably yield, say, ₱20,000.

The proposed new license ordinance is estimated to produce at least ₱75,000.

Sixty per cent or more of the internal-revenue tax is collected within the city of Manila.

Under the present law the city of Manila receives less than 1 per cent of the total collection throughout the Archipelago, not including the cedula tax collected wholly for the benefit of the city. A dividend of at least 5 per cent would be, in our judgment, a more equitable division and would give to the city an additional ₱250,000 or ₱300,000.

It would not be an unreasonable measure to impose a light wharfage tax that would help out in the maintenance of river walls, walling in and deepening of esteros, etc., as provided by the Charter.

In connection with the subject of public improvements it may be said that the Board has upon the suggestion of taxpayers informally considered the advisability of asking for authority for a further issue of improvement bonds, and such a plan was recommended in the last annual report.

It is believed now, however, that it would be a mistake for the city to go more deeply into debt. While it sounds very well in theory to let coming generations pay their share of the benefits to be enjoyed by them, and in practice is logical as applied to such improvements as the present bond issue covers, coming generations will have plenty of ways for their money to keep the good work going along; for a city is never finished unless by the apathy of its own citizens it becomes literally dead, and in such a condition the burden of a bonded debt would be greater to them than the paying-as-we-go-along plan is to the taxpayers of to-day.

The bonded debt already created is equal to 10 per cent of the total taxable property of Manila, and this ratio of indebtedness would be considered the limit in any well-governed city in the States.

When all the bonds now authorized are issued and disposed of the fixed charges for interest and for the sinking fund will aggregate ₱475,000 annually—no insignificant sum to be provided for out of the much-limited resources of the city.

It is therefore the judgment of the Board that the bonded debt should not be further increased until such time at least when the sinking fund shall have reached such proportions as to materially reduce the present bonded debt.

Estimate of current expenses for fiscal year 1907 as submitted to the Commission.

Municipal Board	₱208,200.00
Law department	128,222.00
Fire department	292,679.74
Police department	840,875.00
Schools	292,694.00
Department of sanitation and transportation.....	737,300.00
Department of engineering	891,674.00
Department of assessments and collections.....	107,500.00
Total	3,499,144.74
Add for interest on bonds and sinking fund.....	158,740.00
Add for first payment "Luneta extension" loan.....	35,000.00
Grand total	3,692,884.74
Estimated revenues, as per latest report of city assessor and collector, based upon a real-estate levy of 1½ per cent	₱2,719,300.00
Deduct, say	19,300.00
Total	2,700,000.00
Add Insular Government's share	1,157,142.85
Grand total	3,857,142.85
Surplus to apply to deficit on public works.....	164,258.11
Aggregate	3,857,142.85

ENGINEERING AND PUBLIC WORKS.

Following is the report of the work accomplished by the department of engineering and public works for the year ending June 30, 1906:

From July 1, 1905, to August 14 the office was in charge of Mr. Howard F. Hyde, first assistant engineer, as acting city engineer, and since that date under charge of Mr. Robert G. Dieck as acting city engineer to December 31, 1905, and as city engineer since January 1. The department is organized under the following divisions: (1) Drafting and surveys, with Mr. W. P. Wylie, first assistant city engineer, in charge; (2) water supply and sewers, Mr. A. F. Armstrong, superintendent (on leave), and Mr. A. Gideon, assistant engineer, sewer and water-works, acting superintendent; (3) street construction and bridges, Mr. L. F. Patstone, superintendent in charge; (4) buildings and plumbing inspection, Mr. L. A. Dorrington, superintendent (on leave), and Mr. Claude Lindsey, chief clerk, acting superintendent; (5) the city repair shops, Mr. H. J. Meany, superintendent in charge.

DRAFTING AND SURVEYS.

The main body of work accomplished by this office has been the establishment of street lines and grades and the lines for general construction throughout the city, the preparation of plans and technical

descriptions of land expropriated for street widening, and the checking of descriptions of properties entered for registration before the Court of Land Registration. Careful attention is required in all these branches of the work, for in them the interests of the city are directly affected.

Considerable difficulty has been encountered throughout the whole year in checking descriptions of property sought to be registered as submitted by private surveyors. There seems to be small appreciation of the fact that there is variation in the magnetic north, and that reference to the city lines should be made in the descriptions. A large majority of the descriptions submitted are so palpably in error that their acceptance by the Court of Land Registration must eventually produce difficulties in the transfer of lands. Cases have been noted in which an error of 25 per cent in area appear. With the extension of the city monuments a large percentage of this difficulty will be removed, as immediate reference to the city lines can then be made by private surveyors. With this end in view, a number of monuments has been set in the city in accordance with the lines established by the Municipal Board, but a large part of this work remains untouched. Appreciating the fact that the fixed points on streets are in danger of being lost through removals and new construction, efforts are being put forth to preserve all such points by establishing monuments as rapidly as possible. This work will be pushed in the coming year.

The following-named streets were surveyed and building lines approved: Calles Gagalangin, Union, Moriones (east from Calle Lemery to Calle Santa Monica), Tondo; Calles Amador Ariadan, Caballeros, and Juan de Moriones, San Nicolas; Calle Orozco, Santa Cruz; an unnamed street extending northward from the Ayala Bridge to Alejandro Farnecio with a connection to Calle Tanduay, San Miguel; Paseo Magallanes, Intramuros; San Antonio (F Street) and Callejon Grey, Ermita; Calles Looban, Perdigon, Peñafrancia, and Union, Paco; and Calle A and First and Second Avenues in the Santa Ana street scheme.

General maps of the districts of Binondo, Santa Cruz, and Quiapo, on a scale of 1 to 400, connecting the approved street lines, have been prepared. A complete topographical survey has been made of the district of Intramuros, between Calzada de Bagumbayan and Fort Santiago, including the new harbor works, the Luneta extension, and the new harbor lines for the Pasig river. When completed, the plan prepared from the notes of the survey will form a rational basis for the location of streets in the reclaimed area and for the treatment of the city wall and the moats.

The system of city levels was extended by the location of 272 benches referred to mean lower low water as determined by the United States Coast and Geodetic Survey. Many of the monuments previously established had been destroyed through changes in street grades and construc-

tion of new buildings, and all were replaced. In all, there exist 375 checked benches in the city, which is a sufficiently extended system for present purposes.

A number of observations were made upon the polar star for the determination of true north and the true bearing of streets determined therefrom. The data secured from these observations will be of great value to private surveyors, as the lines of their surveys may be referred directly to the true north instead of as at present to a magnetic north, which varies considerably in different parts of the city.

The development of the plan for the Cementerio del Norte was carried out as the needs demanded, the lines of the roads and lots being carefully marked by monuments. Probably only minor work will be required during the coming year, as lots in the cemetery are not now being acquired very rapidly.

The cement-testing laboratory was operated with satisfaction during the year, and several shipments of cement intended for use on public works were rejected for failure to comply with the specifications. The equipment of the laboratory is rather restricted, and complete physical tests may not be made; however, in general, the tests have indicated with reasonable accuracy the character and physical qualities of the cement submitted. Although more complete tests are desirable to thoroughly determine the quality of cements for special purposes, these may at present be omitted, but eventually the laboratory should be fully equipped in order that full knowledge of all cements supplied in the local market may be obtained.

The wall constructed from Insular funds, under contract with Mr. Salvador Farré, west from a point near the old Santo Domingo Gate for a distance of approximately 304 meters, was completed on March 26, 1906, for a total cost of ₡314,935.80. The original estimate of cost was ₡306,856, the increase in cost being due to minor changes found necessary in the work and to the increase in length and number of piles in certain doubtful sections of the work. The backfilling behind the wall has been carried on with the funds remaining available from the appropriation, and to June 30 ₡10,014.22 were expended in this work. It is recommended that the work be protected on the stream face by riprap, as dredging in the river to the depth of 18 feet, as determined by the Bureau of Port Works, may eventually create dangerous currents at the foot of the wall. A slight movement has already been observed in a portion of the work and may be traced to this cause.

The Atlantic, Gulf and Pacific Company secured the contract for the construction of the concrete river walls immediately west of the Bridge of Spain and commenced work in July. On the north side of the river a wall of approximately 95 meters' length was completed by the caisson method from the north abutment of the Bridge of Spain to the west side

of Calle Rosario, at a cost of ₱111,255.86. In connection with this work, the west approach to the bridge was widened and a Guadalupe stone wall constructed in the rear of the Extremeña building from the general funds of the department. The grade of the approach was decreased from about 9 to 4.5 per cent, and its length increased from 30 to 55 meters. The substratum of soil near the bridge showed less bearing power than anticipated, and extra long piles were necessary to insure safety. Because of the shallow foundations of the north abutment of the bridge, a change in plan at this point was necessary, and a special construction employed immediately adjoining the abutment. Signs of weakness appeared in the masonry of the abutment, and in order to avoid any accident heavy piles were driven as close to the bridge abutments as possible and concrete deposited in large bulk immediately alongside of the abutment. As a further protection to the wall, a close connection between the abutment and the wall was avoided, and for a short distance immediately alongside of the bridge the wall was constructed as a screen without a caisson. This method of treatment has been very successful, and careful observation has failed to discover any weakness either in the wall or in the abutment. As a further protection to the work, especially heavy riprap was deposited at this point.

The work on the south wall was commenced from the east end of the Farré wall and carried on continuously from this point. Up to June 30 ten caissons of the twelve to be sunk were in place and completed. The total estimated value of the work on that date was ₱130,508.16. It was anticipated that 244 linear meters of wall could be constructed on this bank with the funds available, but as a result of the experience gained on the north river wall in the matter of piles, which were of greater length than estimated, instructions were given to the contractors to prepare for the construction of 180 meters of wall only. Later developments in the work showed that the length of piling would not be as great as that on the north wall and that about 220 meters of wall could be constructed with the funds available. It is hoped that the contractors will continue their work under the present contract, although it is probable that an agreement of this nature may not be secured, because their preparations had been made in accordance with the previous instructions. In general in regard to these walls, it is believed that the crib foundation is of unnecessarily great thickness and economy in this direction could be secured. When the wall is extended to the Bridge of Spain, a change in this portion of the plan is desirable, for economical reasons. During the construction, the type of coping was changed from granite to concrete, and the appearance of this coping is uniformly good. The only difficulty is that injury to it may occur while the concrete is green.

WATER SUPPLY AND SEWERS.

The equipment of the pumping station shows signs of wear. The steady increase in the use of water, consequent upon a more extended sprinkling of streets and the installation of sanitary fixtures in a large number of buildings has so far taxed the pumps that they are badly worn in all the moving parts. In consequence of this severe service, minor defects can not be noticed, as opportunity to shut down the pumps for an inspection rarely occurs. At the end of the past dry season an examination showed that extensive repairs were necessary. This neglect, consequent upon the continued operation of the pumps, has increased the coal consumption, and efforts will be made in the coming year to correct all imperfections in the pumps, so that the consumption of coal may be reduced to the minimum.

Three accidents to the boiler equipment occurred. The furnaces of boilers A, B, and C were burned at points close to the feed connection. The total cost for the repairs to these boilers was ₱6,145.

All the buildings at the pumping station and Deposito are in good condition, having been painted and repaired during the year. The rock-fill dam on the Mariquina River has been repaired in part and the concrete paving on the crest at the east end which was uncompleted at the commencement of the last rainy season was finished. The dam is now reasonably tight and supplies sufficient water for the pumps.

The conduit and reservoirs are badly in need of overhauling. During the past dry season, when there was for about a month a considerable shortage of water, a cursory examination was made of the conduit and reservoir, and several large leaks were located. As permanent springs are seen close to these structures, there is reason to believe that other leaks of magnitude exist. These, however, may not be definitely located without emptying the conduit and reservoir. Their existence is also proven by the extensive filtration into the conduit and reservoir during times of heavy rain, when the engines may be stopped without reducing the supply to the city or lowering the water level in the reservoir. Further than this, the conduit is badly fouled, and the resistance to flow is increased by large deposits of silt on the floor and growths on the walls. In all probability, the fishy taste of the water may be lessened by the removal of all of these plants from the conduit.

Repairs to the Santolan road were of a minor nature and only such as would keep up communication between the city and the station. The operation of the road locomotive through the year has not been satisfactory, as a sufficiently hard road surface could not be secured. The heavy dust along the road has also injured the moving parts of the engine and made considerable repairs necessary.

The distribution system is in good condition in all its parts, although a number of minor repairs has been necessary. The uncovered 26 and

22 inch mains from a point east of Calle Tanduary to Calle Arlegui were lowered and covered, and the bridge crossing the line at Calle Tanduary removed. This job was of a rather difficult nature, in view of the fact that a stiff connection with three large-flanged valves was located in the bed of Calle Tanduary, and was necessarily moved as one piece. The total lowering at this point was about 1.50 meters and was accomplished without mishap or interruption of the supply. The total cost of the work was ₡2,069.29.

In consequence of the removal of the old Ayala Bridge, the 12-inch main supply for Malate was shifted from the old bridge to the bridge in course of erection. While operating on this transfer, a launch with a heavy tow collided with the screw-pile foundation of the old bridge, wrecking the trusses and breaking the water pipe. Preparations for the transfer were so far advanced that the shifting of the pipe was completed within twenty-seven hours and water turned on.

During the year eleven pipe extensions were laid with funds secured from the bond issue. The necessity for further extending the distribution system by lines of small diameter into the outlying districts is very apparent. Extension must closely follow improvements to property in order that taxpayers may be supplied at the earliest practicable moment.

The fire-hydrant service has been increased during the year by 18 fire hydrants of the new pattern, and has been constantly in good working order. The fire department has been of great assistance in locating imperfections in the system by its monthly inspections and tests.

The installations of services had a substantial increase during the year. In all, 395 services were connected—an increase of 11 per cent in the total number of services. This increase may be traced in part to the extensive building operations and to the requirements of the Bureau of Health.

The ordinance now in force regulating the water supply has been found insufficient and in some points obscure. As a consequence, its enforcement has been both difficult and open to criticism. A simplified and more complete ordinance has been drafted and is now before the Board. All the points on which there was contention have been touched upon in this draft, and it is hoped that upon passage of the ordinance no further complaint will be possible. The present water rate, while yielding sufficient revenue to meet the ordinary expenses of operation, is too low. Considering all factors entering into the production of water—the difficulty of coal haulage, the continual repairs to the conduit, reservoirs, pumping machinery and boilers, the supply of large quantities of water for Government uses, and the expense of extending the water mains—the charge of 5 centavos per cubic meter or 20 centavos per 1,000 gallons is very reasonable. The present method of computing charges is rather complicated, in that for larger quantities of water

than 300 cubic meters per month, the excess over 300 cubic meters is charged at 4 cents per cubic meter. The smaller consumers will not be affected by this proposed change of rate. The charge of 10 cents per cubic meter for water delivered to water boats is also too low, and a considerable increase of revenue may be secured by increasing this charge. Heretofore no provision has been made for a sinking fund to provide for extensions and the replacement of worn-out machinery. The establishment of such a fund is recommended, in order that a reserve may be available at all times for work of this nature.

A general survey was made of the existing sewers within the city in order to determine their location, size, and depth with reference to the city lines and benches. A large number of unknown sewers was discovered, and the data secured will be of extreme value in the sewer and water construction now under way. This survey has revealed the fact that a large amount of unnecessary work has been performed which eventually must be abandoned. The sewers constructed in the past two years on a definite plan have shown themselves to be capable of removing the water from the streets, even in the heaviest showers, and of keeping themselves clear of sediment. There are certain localities, however, which are badly in need of drainage facilities, particularly parts of Paco, Ermita, and Tondo, where changes in grade and the construction of new streets have interfered with the natural drainage. All new work constructed during the year was from funds arising from the bond issue, and was laid out in conformity with the general drainage scheme.

The entire drainage system of Intramuros was examined and cleaned, as were the drainage systems of parts of Binondo and Quiapo. The work required in Intramuros clearly showed that these sewers had been neglected entirely for many years. In all, 2,000 cubic meters of material were removed from the sewers. This deposit consisted in most part of sand and stone from street washings, mixed with putrifying vegetable matter. Silt basins, while serving to prevent the entry of street washings, are useless unless thoroughly and regularly cleaned; so that their construction in inlets, except in particular instances, is inadvisable, as in this climate they would cause nuisances.

The temporary sewers in the moat were cleaned and repaired where necessary. Careful investigation of their condition shows that they can not much longer remain without extensive repairs. It is essential that permanent drains be constructed in their place within a short time, as with each year the item of repairs and renewals will become heavier.

The section of boiler inspection, under charge of the boiler inspector, made 186 inspections of boilers of an aggregate of 8,546 horsepower. As the time of the boiler inspector was not entirely consumed in the regular inspections, his services were employed in conducting inspections of city machinery and of repairs to equipment.

By the repeal of the old building ordinance, the regulations under which the inspection of boilers were carried out were likewise repealed and an entirely new ordinance separate in all respects from the building ordinance must be enacted. A draft for such an ordinance is now before the Board and should receive its early consideration. It is essential that the practice of steam engineering should be regulated by requiring candidates to submit to an examination before a board of competent persons. At present many incompetent persons are employed in the operation of machinery and the care of boilers, and that serious accidents have not occurred is remarkable. An examination of the boilers in the city makes it clear that it has been the practice of importers to offer for sale in the Manila market boilers whose installation in places with rigid ordinances would not be permitted. A modern ordinance drawn in conformity with the latest practice would prevent such installations. Even though many boilers are deficient in design, their owners insist that high pressures be allowed, and much friction has been caused thereby. It is very important that a complete ordinance governing all boilers and machinery be enacted at an early date.

STREET CONSTRUCTION AND BRIDGES.

The organization of this office has remained practically constant, the street work being divided into four districts, each with an inspector, the bridge work under a bridge inspector, the water transportation under a launch master, and the quarry work under a foreman.

The street area under repair is as follows:

	Square meters.
Wood block	17,432
Granite block	37,679
Macadam	1,299,014
Total	1,354,125

This area includes 465 streets and 175 plazas and extends over 136.11 kilometers.

In the bridge section 54 bridges and 17 culverts are under repair. Under this section also the operation of the Binondo lift bridge falls, and the construction of all heavy masonry walls.

The cost of operating the office for the supply of material was as follows:

Where used.	Labor.	Coal.	Dynamite.	Oil, waste, and minor supplies and repairs.	Total.
Quarry	P42,867.10	P6,833.97	P5,943.66	P5,934.87	P61,579.60
Launches	10,929.84	8,513.50		7,458.95	26,902.29
Scows	46,301.10			8,733.42	55,034.52
Total					143,516.41

The cost of broken stone produced at the quarry under these items has been: Quarry, stone crushed, 49,954.03 cubic meters, unit cost, ₱1.33 per cubic meter (in the bins); launches, materials towed, 54,657.60 cubic meters, at ₱0.47 per cubic meter (includes gravel towed); scows, materials handled, 54,567.60 cubic meters, at ₱0.86 per cubic meter (including gravel handled).

Total cost of stone on shore, Manila, including wear and tear on plant, ₱2.56 per cubic meter.

The total cost of transportation for street work was ₱64,255.39. The success of street work depends in large measure upon the handling of the transportation, and the extent of the work accomplished is evidence of the fact that the transportation was used to good advantage. Observation made during the past year has shown that the stock traveling at the rate of 2 miles per hour can haul economically and without deterioration, 3,800 pounds of material in double teams with American animals, and 1,700 pounds in single teams with Chinese animals. The present equipment of rock beds and escort wagons is not suited to street work, as a large amount of unnecessary labor is expended in unloading, from the peculiar construction of the wagons. Experiments were tried with two two-horse dumping wagons built at the shops. Their use has been very successful, and it is recommended that for work on streets wagons of similar nature only be employed. If this be done, a probable saving in labor to the amount of 5 or 10 per cent may be effected. The wagons have cost somewhat more than rock beds, but their use has proven economical in labor.

The launches made round trips to quarry as follows: *Washington*, 151 trips; distance traveled, 8,154 miles; *Jan*, 145 trips; distance traveled, 7,830 miles.

In addition, shorter trips were made to the gravel dredge in the upper Pasig River. These launches have been overhauled and repaired in the year, but the *Washington* is in such condition that its use for a longer period than six months is positively dangerous. The hull, including frames and sheating, is in a rotten condition and may at any time fall out. A cement dam has been laid over the whole bottom in order to prolong the launch's usefulness, but this will probably not last for more than a few months. The placing of this cement has increased the draft and has made operation in the shallow river much more difficult. For this service a twin-screwed launch of draft not greater than 4 feet 6 inches is recommended as most efficient.

The scow equipment consists of twenty-one scows of 22 cubic meters capacity, and three of 60 cubic meters' capacity. The former are too small for economical work and the latter are too larger for handling in the river. For this work scows of 30 to 40 cubic meters' capacity, of light draft, are more suitable, and the replacement of the scows should

be made on this basis. Several of the smaller scows are in bad condition and their use must shortly be discontinued.

The sidewalks throughout the city have been neglected. The order of the Municipal Board restraining the city engineer from ordering the construction and repair of walks in front of private property has worked to disadvantage and has resulted in entire neglect both by the city and by property owners. It is reasonable that the cost of such work should be a charge against abutting owners, and legislation in this sense should be secured. Considerable complaint has been made that the city in changing grades of streets has damaged sidewalks by leaving them at their original elevation. This is undoubtedly a reasonable complaint, and it appears that it is the duty of the city in such cases to so repair the sidewalks that the drainage of property and convenience of pedestrians may not be affected.

Through lack of funds the construction of curbing has not been possible except in particular cases. To make available the storm-water sewers lately constructed a considerable amount of this work must shortly be done. Aside from the drainage question, the construction of curbs influences in great measure the cost of maintenance of the streets. A well-confined street area maintains its condition with less expense than a free roadway. On many streets also, the construction of curbing would lessen the amount of street area to be kept in repair, with immediate reduction in expenses.

The system of street signs was improved by the erection of 1,541 wooden signs of an improved type. These signs, while not artistic, are very legible and satisfy temporarily the conditions. The total cost for this work has been ₱674.95, which, considering the convenience and the extent of the work, was a very small expense. As funds are at hand, permanent signs with raised enameled letters should be installed. In the larger public places elaborate signs might be erected with good artistic effect. The system of street names is badly in need of correction, as it is both complicated and confusing. A scheme for renaming all the streets of the city has been under consideration for some time, and will be shortly presented to the Board. This scheme seeks to preserve the old names and to remove all repetitions.

All the iron and steel bridges have been painted during the year to prevent corrosion, and the woodwork of all wooden bridges painted with coal tar to prevent the attacks of insects. In general, it may be stated that the condition of the bridges is poor. The Palomar, the Azcarraga, and Bilibid bridges are all in need of rebuilding. The stone arch bridges over the Paco Estero and the Estero de Quiapo are in need of major repairs, as the arch rings show positive signs of movement. The appropriations heretofore allowed have been insufficient to make needed repairs, and in consequence a large amount of money has been expended in work

of doubtful value. Because of the shortage in funds, the flooring of the Palomar and Azcarraga bridges were laid with Oregon pine lumber. The inadvisability of this practice has become manifest, as, after six months of service the flooring is useless through wear, and must be replaced. The appropriations for this work should be generous, as following the opening of the street railway to traffic greater repairs have become necessary on all the bridges crossed by the tracks.

The use of the Bridge of Spain by the railway company has undoubtedly injured the arches, as greater vibrations are now noticeable in the bridge under traffic. These arches will surely not long bear such severe stress as now imposed upon them, and some means should be taken either to replace them or to construct a new bridge close to this crossing. It has been proposed further to increase the headroom of this bridge by raising the arches in one or two spans, so that launches may at all times safely pass under it. This will be an expensive repair and may prove to be inadvisable upon investigation.

A reinforced steel concrete arch of 14 meters clear span with a clearance of 4 meters above mean low water and width of 10 meters between curbs has been built over the San Miguel Estero, under contract with J. G. White & Co. Sidewalks of a width of 1.85 meters were bracketed from the arch, and stairways constructed leading to them. This detail is of doubtful utility, as at present very few pedestrians make use of the steps, seeming to prefer the freedom of the roadway. The foundations for this bridge were for the most part of piling, although in the east abutment a portion of the old abutment which consisted of heavy concrete blocks was left in place. At several points running material was encountered, and for a time fears were entertained that the foundations might be insecure. Several additional piles were ordered driven in the doubtful places, and after that no difficulties appeared. The reinforcing of this bridge consisted of 37,500 pounds of three-fourths and one-half inch Johnson bars. The total cost of the bridge, including the additional piles, and reduced by the penalties imposed for delay in completion, was ₱36,029, of which the city paid ₱16,200.54 as its proportion of cost.

A steel lift bridge was built over the Estero Binondo at the foot of Calle Soledad, thereby making a direct connection between the business district and the custom-house. The construction of the substructure of this bridge was advertised for but no bids were received, and the city was compelled to construct the foundations with its own labor. In this bridge, also, a portion of the old foundations laid by the Spaniards was found in good condition and employed in the work. For the foundations of the towers the work was carried on in cribs. This method was employed in order not to interfere with navigation in the estero and was more expensive than would have been the case with work carried

on in cofferdam. The city also laid the approaches to the bridge and reconstructed the estero walls where necessary. The contract for the superstructure was let to Germann & Co. for the sum of ₱39,580, and was completed to satisfaction in December. This superstructure consists of a movable platform with a clear roadway of 6.7 meters and two sidewalks of 2.3 meters in width. The span from center to center of supports is 13 meters, and the clear channel between abutments is 12 meters, which is ample for all traffic. This movable platform is electrically operated from a small operating house situated north of the bridge at the Calle Soledad end.

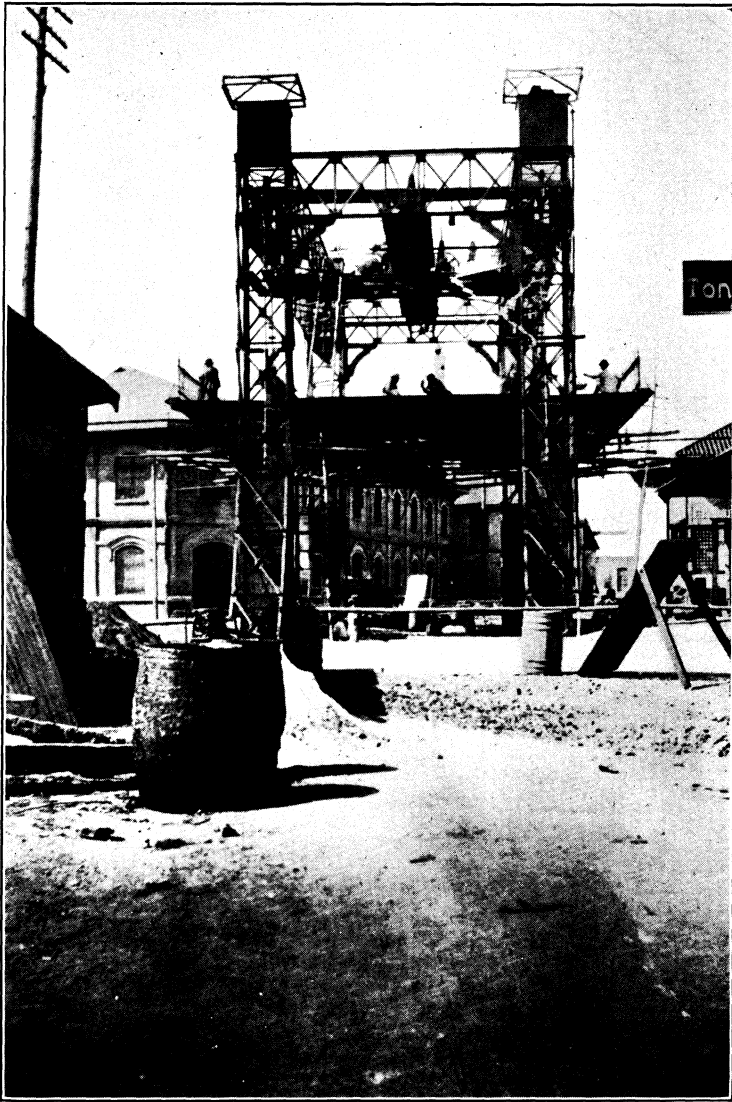
Traffic observations have been made at this bridge, and upon the average for a day of twenty-four hours 13,400 pedestrians and 1,382 vehicles pass over the bridge, while 141 cascos pass beneath the platform. The average cost of lifting the platform, exclusive of repairs, has been, since the date of opening, December 28, 1905, ₱0.27 per lift.

The contract for the erection of the superstructure of the Ayala Bridge was let to the Atlantic, Gulf and Pacific Company in March of last year, but when the steel arrived the abutments and pier were not ready. It had been the original intention to use the foundations of the old Ayala Bridge in the work; but further examination of these structures and consultation with the former city engineer, Señor Don Carlos de las Heras, showed that the safety of the structure might be endangered by their employment. Following this, a new location, with entirely new foundations, was proposed and approved. The Atlantic, Gulf and Pacific Company also secured contract for this construction. Work was further delayed by the noncompletion of the bridge over the San Miguel Estero, which prevented the closing of this river crossing. After considerable difficulties with the foundation and the wrecking of the caisson for the center pier, the work was finished in June. A number of additional piles of greater length than estimated were necessary in both the pier and the abutments.

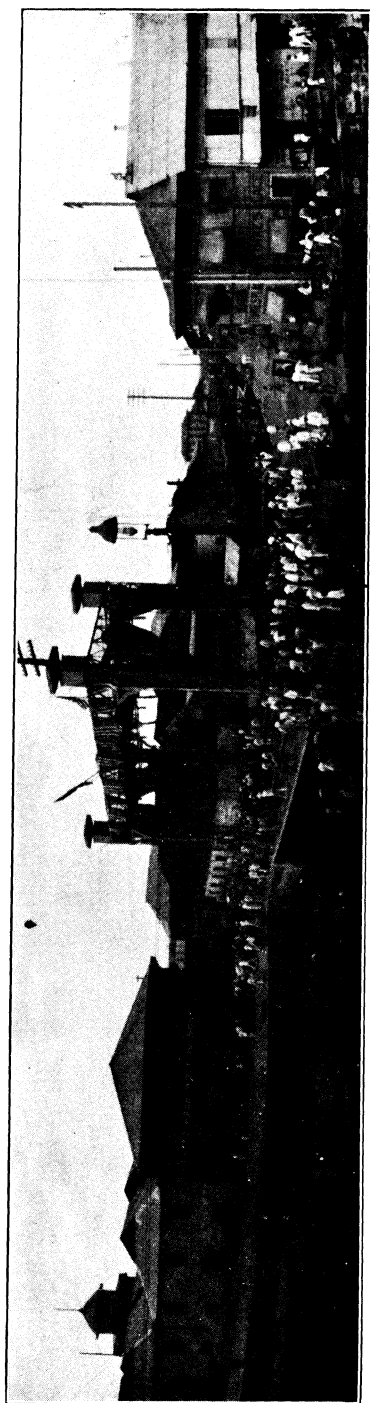
The falsework for the superstructure was commenced in March, and, while the substructure was not finished, the steel was being erected on the south span from the south abutment. When the assembling of the south span had extended to a point within one panel length of the pier, work was abandoned on the south span and the erection commenced from the north abutment. This was necessitated by the delay in placing a second caisson for the pier. The assembling of the entire work was completed in June and the trusses lowered upon their seats. Up to June 30 about 75 per cent of the rivets had been driven, and at the rate of progress the bridge will probably be opened early in August. This bridge consists of two spans of the Pratt double intersection type, with curved upper chord, and is throughout a riveted structure with pin bearings. The bridge has a clear roadway of 6.70 meters with two sidewalks of a



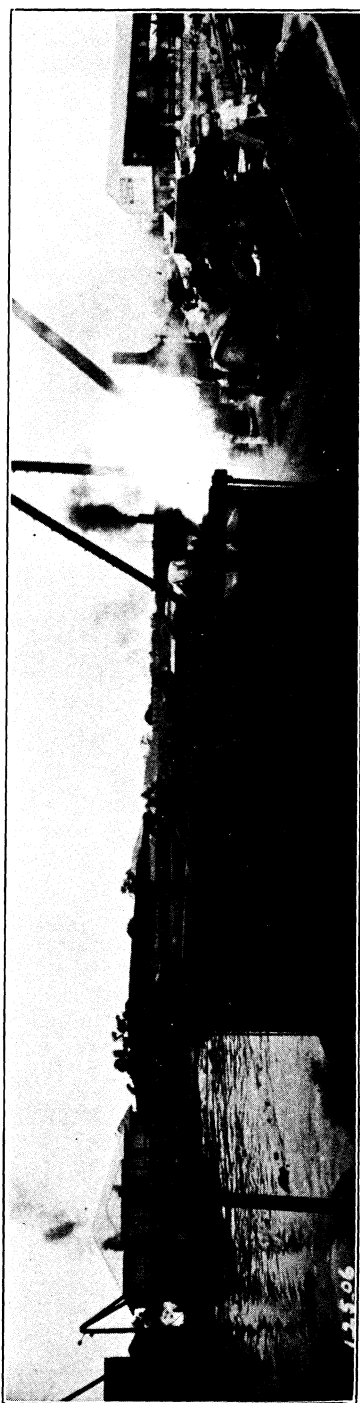
SITE OF BINONDO LIFT BRIDGE BEFORE CONSTRUCTION (OLD FERRY).



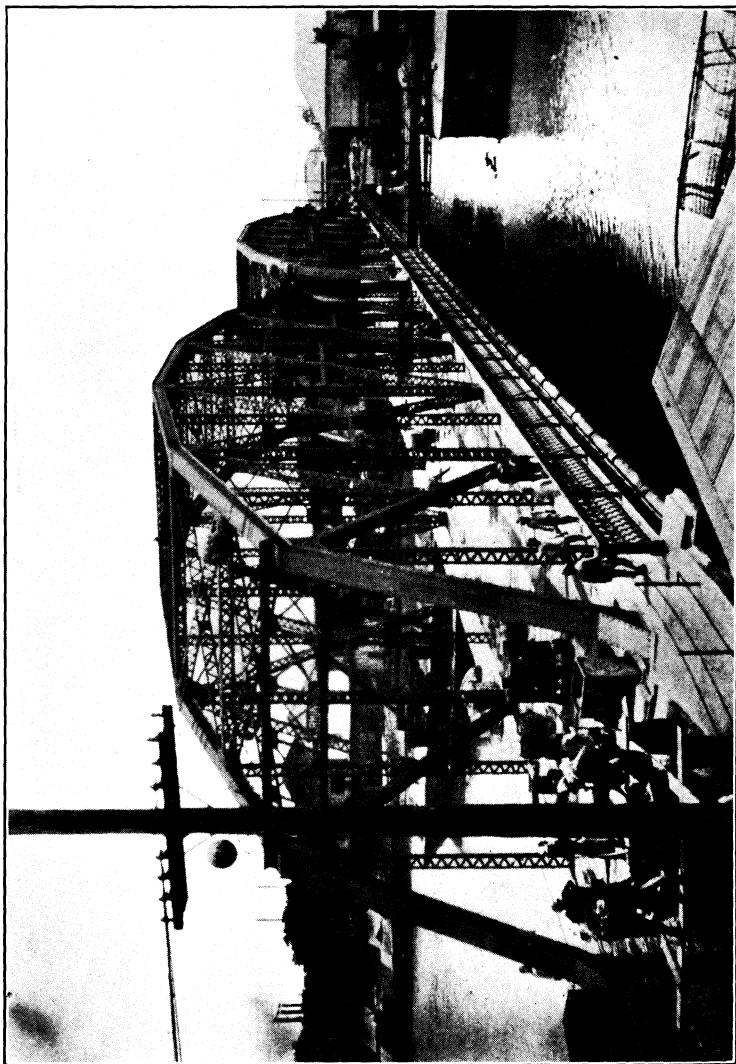
BINONDO LIFT BRIDGE IN CONSTRUCTION.



OPENING OF BINONDO LIFT BRIDGE.



CONSTRUCTING CENTER PIER OF NEW AYALA BRIDGE.



NEW AYALA BRIDGE.

width of 1.75 meters. The floor consists of buckle plates riveted directly to the floor beams. The south span has a length of 202 feet between end pins, and the north span of 242 feet between end pins. It is the intention to lay the roadway with asphalt as an experiment.

In connection with this work it was necessary to widen the approaches and to construct new retaining walls. Land was acquired to the east of the north approach, so as to afford a clear roadway of 8 meters and sidewalks of a width of 2 meters to the centers of the approach railings. It was possible to preserve the west wall of the north approach with some minor changes, but the three remaining walls were constructed from general funds of the department, with Guadalupe stone secured from casemates removed from the city walls at Fort Santiago. In all, 1,314 cubic meters of masonry were laid up, at a cost of ₱5 per cubic meter, exclusive of the value of the stone. These walls present a fine appearance and were economically constructed.

To accommodate the traffic from the new bridge to the Isla de Convalecencia, a pair of the 12-meter trusses of the old Ayala Bridge were erected from the new pier to the old pier, and a solid reinforced concrete floor is being laid. This bridge will be sufficient for all traffic to this institution. The work is being done at city expense.

The remaining trusses secured from the old Ayala Bridge are available for erection in various parts of the city. There were secured in all eighteen pairs of trusses of 12-meter span and six pairs of 8-meter span. These are suited for ordinary light highway traffic with some slight changes and repairs. Additional floor girders and stringers are necessary, as considerable corrosion is noticeable in parts near the seats. It is proposed to erect with these, bridges crossing the Trozo and Meisic Esteros on the line of Calle Soler. The trusses may be depended on for several years longer, and it seems wiser to employ them as a temporary measure than to enter upon the expense of building permanent steel concrete bridges at these points. There is necessity for a bridge also on the line of Calle Moriones over the Canal de la Reina, and here also the trusses from the Ayala Bridge may be employed. If funds may be drawn from the regular appropriation for the department, it is purposed to erect abutments for these bridges and to place the trusses on temporary bridge seats. The form of construction will be such that later the bridges may be altered into arch bridges, although in the case of the proposed Moriones Bridge, such change is very remote.

Several of the city bridges are in need of widening, particularly those on Calle Tanduay and on Calle San Sebastian. With the opening of the Ayala Bridge traffic along Calle Tanduay will be increased and some additional provision must be made for its accommodation. Widening may be effected by the construction of I-beam sidewalk brackets set in concrete above the arch ring at a very small expense, and effort will be

made to accomplish this improvement within the coming year. The bridge on Calle San Sebastian has become a danger point since the opening of the street-railway line. A plan has been completed for the widening of this bridge by means of I-beams set on auxiliary abutments. The intention is to construct a solid concrete floor over these, and to make the sidewalks entirely independent of the arch ring. Work on this bridge will shortly be commenced.

The wooden bridges throughout the city should be replaced by permanent construction. The maintenance cost of these bridges is becoming excessive, and funds should be allowed for their replacement. Wherever possible, a concrete steel bridge is desirable, as the maintenance cost is practically zero.

The occurrence of numerous esteros in the city gives excellent opportunity for improvement in the movement of traffic, but the confinement and dredging of these esteros is necessary in order to realize this condition. These esteros should be dredged to accommodate boats of at least 1 meter draft at lowest tide, and all bridges should have a clearance at mean low water of at least 4 meters, to make possible a thorough use of these natural waterways. For this work a special design for a shallow wall has been worked out, but is not yet in satisfactory condition. A more extensive use of these esteros will be immediately economical for these reasons: First, the streets will be cleared of a large portion of the traffic; second, the cost of maintenance of roadways will be reduced; and third, a reduction in the clear width of the roadway will be possible, thereby saving original cost of construction. The dredgings secured will be available for street filling and for the filling of lowlands. By means of a hydraulic dredger lowlands close to the estero banks could be filled at small cost, and large areas of land at present unsuitable for building purposes would become available. Following the filling, greater receipts could be secured from taxes and the city would be benefited in still another direction. As this work is of great magnitude, it could not be taken up except in small sections, but the esteros which seem to require immediate attention are the Binondo Estero, the San Sebastian Estero, and the Canal de la Reina.

With the development of building construction in the outlying sections of the city, the problem of properly maintaining an increasing area of streets is becoming a serious one. The stone available may be classed as fair, and unsuited to heaviest traffic. With each year the cost of repairs to streets already in existence becomes greater, even though the drainage has been improved by a proper grading in the gutters and by building the roadway with an adequate crown. The argument for permanent paving becomes stronger every day, and undoubtedly it will be cheaper in the end to provide permanent pavements in streets where traffic is heavy, extending the work as conditions warrant to other sections. The

Australian wood-block pavement already laid has not proven satisfactory. The blocks are readily attacked by white ants, and as they are untreated and improperly seasoned, rotting, checking, and swelling have been noticed. The molave blocks removed from the Blanco Bridge at the time of the laying of the pavement on Calle Rosario were shown to be in sound condition and to have suffered little wear, even though laid for nineteen years. Although these blocks were about twice as expensive in original cost as blocks from Australia, it is now known that their use would have been economical. The pavement laid on the Escolta and Calle Rosario has failed in many places, and within a few years extensive repairs will be necessary. Effort has been made to interest importers and local merchants in the supply of vitrified paving brick, and within a short time it may be possible to lay several trial strips of this kind of pavement. The suitability of asphalt for Manila streets may be determined from the result of experiments on the Ayala Bridge. A minor experiment has also been made with the use of oil on macadam streets, but the results have not been satisfactory, in that the correct proportion of oil was apparently not applied. The advisability of laying streets with cement blocks has also been inquired into, and one manufacturer is now endeavoring to produce a block of marketable value.

Late in 1905 the Philippine Islands Telephone and Telegraph Company commenced the laying of conduits for its telephone wires in several of the business streets, employing cement ducts in the construction. This experiment has been watched with much interest, as success in this work will be of immense importance to the city. Apparently the material in the conduit section was improperly tamped or the joints between the sections, where burlap soaked in tar was wrapped, were not made tight, as considerable seepage of water has occurred along the whole line. In part, the seepage is due to filtration through the floors of the manholes, which in the majority of cases are below mean low water. This condition might, of course, have been avoided by waterproofing the manholes. For the remaining portions of the lines the company has employed aerial cables, in part strung from its own poles and in part from the city's poles, under terms of an agreement with the city. This has been a favorable arrangement, as the placing of a large number of poles in the streets has been avoided.

The experience gained in the past year, during the severe typhoon, has clearly shown the inadvisability of permitting the stringing of more wires in the streets. At that time the danger from the falling wires was very great. In addition to this, the streets are badly disfigured by the unsightly poles which have been erected. In the majority of cases these poles are not provided with steps and are mounted by means of linemen's spurs. The scars resulting from repeated climbings heighten their unsightliness. To avoid this condition, all companies should be compelled

to provide suitable steps on their poles and mounting by linemen's spurs should be prohibited.

The subdivision of streets as heretofore practiced and as provided for in the Building Code appears to be in part in error, as too large a proportion of the street area is thrown into roadway, restricting the area for parking. This subdivision results in increased expense for maintenance of roadway and less favorable drainage and does not permit shading the streets with trees. A revised regulation in this direction is desirable, and a scheme for this will be presented to the Board.

BUILDING AND PLUMBING INSPECTION.

On January 1 the new Building Code went into operation. This code carried with it certain provisions making for better design in buildings, and while apparently severe in some details, is in other directions rather lax. A serious omission has occurred in the failure to provide for the construction of reinforced concrete buildings. Since January three buildings of this type have been in course of erection and all have been the subject of special investigation to determine their safety. An amendment to the code providing definite conditions for the design would facilitate investigation. Undoubtedly reinforced concrete is the ideal construction for the Philippines, as experience in other sections where earthquakes are frequent has proven conclusively that this method of construction can best resist earthquake shocks. Further than this, the placing of concrete is no difficult matter, and the materials for the construction are always available in the market. The operation of the department under the code has been successful, and while a large number of complaints was entered, immediately upon the passage of the code, these have greatly decreased in number as architects became better acquainted with its provisions. The majority of the complaints were concerned with alleged excessive charges. The ideal condition for a tariff under a building code is that the actual cost of the service shall be met by the fees, and from the short experience this seems to have been gained. There have undoubtedly been errors in the schedule, but some of these have been discovered and corrected. Many disputes have also arisen as to classification of work and interpretations of the code have been made from time to time as necessity demanded.

The section of plumbing inspection has been operating entirely upon regulations prepared by the Bureau of Health, but this arrangement is unsatisfactory because the requirements are not generally known. The enforcement of sanitary regulations in so far as they refer to drainage, plumbing, and proper building construction lies with the city engineer, under supervision of the Director of Health; but as at present enforced, the regulations divide the responsibility. The proposed sanitary code

will clear up many doubtful points and afford a rational basis for the necessary inspections. Undoubtedly the enforcement of this or any code of like nature will meet with opposition in the beginning, but with careful attention to details and a liberal interpretation a reasonable enforcement may be made without great difficulty. The early completion of the drainage sewers requires that an adequate sanitary code be in operation, in order to prevent the entrance of storm water into the drainage system, and it is of maximum importance that this code be in full effect before connections are made to the drainage system.

During the year a large number of light-material buildings were condemned at the instance of the Bureau of Health. As the majority of these buildings were in the possession of poor persons, some hardship was caused; but each case was carefully considered and if repairs were possible, permission to effect them was granted. It has been claimed that this department has been unnecessarily severe in its rulings, but an inquiry into the records of the Bureau of Health shows that in a number of cases in which the orders for removal were rescinded by the Board fatal cases of cholera have occurred during the present outbreak. In the case of the barrio of Rosario, in which practically all the houses in the barrio were condemned as unfit for habitation, a temporary injunction was secured restraining the city engineer from removing the houses. After a strong contest this temporary injunction was dissolved, but the case was appealed to the Supreme Court and is now awaiting decision. It is highly important that a case of this kind should be definitely decided, in order that the authority of the city engineer in such cases may be thoroughly determined. The sanitary conditions in this barrio are such that if the city lose the case there can be no hope for condemning houses for any reason. In various other parts of the town sections with almost equal insanitary conditions exist, which in the interest of the public health should be cleared away.

All the city buildings are in need of painting and general repair; particularly is this the case with the City Hall, which presents a very dilapidated appearance. To protect this against further damage, the entire exterior of the building should be thoroughly painted. The roofs and interiors of the fire stations are in need of extensive repairs. During the past year the Quinta and Arranque markets have been painted and Divisoria Market painted in part. The work on the last market will be completed in July. The need of careful inspection of all steel work was very apparent when the old paint on the markets was removed. No attention has been given to this matter for four or five years and in many parts the steel was badly corroded where the original paint had been worn off through the action of the elements. In no case should the steel in the markets be left without painting for more than two or three years.

CITY SHOPS.

All buildings within the shop inclosure were painted with mineral paint, with the exception of the office, which was painted with lead paint, and all are in good condition. No changes were made in the roads or grounds and for all present purposes the yards are of sufficient extent. A small drying kiln, with capacity for 1,000 feet of lumber, was installed at the wheelwright shop by shop labor when other work was slack.

The jobs worthy of special mention completed were:

Manufactured: seventy-five garbage cans, 300 hatracks, 10 file cases, 750 pail-system commodes, 235 park benches, 1 bear cage, 1 platform pail truck, office signs and directory boards throughout City Hall, 2 two-horse dumping wagons, and all hardware specials for banca repair.

Entirely rebuilt: twenty-seven carromatas, 6 carretelas, 34 hand-carts, 2 light spring wagons, 6 escort wagons, 6 trucks, 5 rock beds, 1 excavator, 1 patrol wagon, 1 ambulance, 1 sheriff's van, 14 dump carts, 29 wheelbarrows, 1 fire engine, and 11 stone scows.

Large jobs completed: Re-covered fish tables in Divisoria Market, general repairs Paco Crematory, painted Luneta police station, Quinta Market, Arranque Market, and shop buildings.

During the first nine months the shops were run to their full capacity, but for the remainder of the year work was reduced; in consequence, the cost of work was slightly increased. The shops are now equipped to undertake any kind of heavy wagon and machine work.

Record, by months, of drafting and surveys completed during fiscal year 1906.

Month.	Assignments.					Work accomplished.						
	On hand on 1st of month.	Received during month.	Total.	Completed during month.	Unfinished at end of month.	Field work.				Office work.		
						Street lines for buildings, fences, curbs, etc.	Expropriation surveys.	Court of Land Registration surveys checked.	Miscellaneous.	Surveys plotted.	Tracings and designs.	Blue prints.
1905.												
July -----	20	64	84	66	18	30	27	6	3	20	42	603
August -----	18	102	120	96	24	43	10	36	7	23	33	1,123
September -----	24	59	83	61	22	35	8	4	14	20	50	519
October -----	22	91	113	100	13	55	6	27	12	31	48	427
November -----	13	68	81	72	9	40	7	9	16	38	43	337
December -----	9	84	93	78	15	27	6	42	3	30	41	504
1906.												
January -----	15	64	79	77	2	30	9	13	25	20	59	616
February -----	2	50	52	45	7	36	9			15	34	545
March -----	7	94	101	79	22	29	12	36	2	8	45	201
April -----	22	78	100	88	12	20	7	23	38	7	30	104
May -----	12	69	81	69	12	16	18	16	19	18	53	478
June -----	12	67	79	73	6	12	6	34	21	11	34	192
Total -----	20	890	910	904	6	373	125	246	160	241	512	5,649

No record was kept of miscellaneous reports made in 1906.

Operation, in hours, of engines.

Month.	Engine No. 1.		Engine No. 2.		Engine No. 3.		Engine No. 4.		Total.	
	Month.	Day.	Month.	Day.	Month.	Day.	Month.	Day.	Present year.	Pre-vious year.
1905.										
July	681	22	612	19. 7	604	19. 5	418	13. 5	2, 315	2, 591
August	619	20	489	15. 8	513	16. 5	642	20. 7	2, 263	2, 344
September	611	20. 4	613	20. 4	491	16. 4	575	19. 2	2, 290	2, 144
October	588	19	601	19. 4	675	21. 8	626	20. 2	2, 490	2, 451
November	716	23. 9	720	24	690	23	520	17. 3	2, 646	2, 252
December	590	19. 03	744	24	547	17. 64	744	24	2, 625	2, 412
1906.										
January	744	24	649	20. 94	646	20. 84	696	22. 45	2, 735	2, 766
February	672	24	672	24	672	24	672	24	2, 688	2, 498
March	741	23. 9	740. 5	23. 9	739. 5	23. 9	739	23. 8	2, 960	2, 831
April	720	24	717	23. 9	717	23. 9	716	23. 9	2, 870	2, 868
May	740	23. 8	634	20. 5	709. 5	22. 9	706	22. 8	2, 789	2, 974
June	490	16. 3	579	19. 3	647	21. 6	334	11. 1	2, 050	2, 559
Total	7, 912		7, 770. 5		7, 651		7, 388		30, 721. 5	30, 690
Monthly average	659. 33	21. 70	647. 5	21. 32	637. 58	21. 25	615. 67	20. 25	2, 560. 9	2, 558

Daily average per engine, for all engines:

Present year Hours. 21.04

Previous year 21

Coal consumption.

Month.	Coal consumed (tons).			Ashes yielded (tons).	
	Per month.	Per day.	Per 1,000 cubic meters of water pumped.	Quantity.	Percentage.
1905.					
July	209. 6	6. 76	0. 333	19. 3	9. 21
August	207. 5	6. 69	. 332	17. 8	8. 58
September	201. 1	6. 70	. 319	20	10
October	223. 6	7. 21	. 325	21. 83	9. 8
November	235. 4	7. 85	. 317	23. 98	10. 2
December	234. 5	7. 36	. 323	25. 17	10. 7
1906.					
January	238. 50	7. 70	. 302	25. 68	10. 7
February	234. 30	8. 51	. 323	26. 26	11
March	* 274. 5	8. 85	. 338	30. 75	11. 2
April	251. 4	8. 38	. 319	28. 6	11. 3
May	253	8. 16	. 331	27. 9	11. 3
June	207. 7	6. 92	. 370	19. 29	9. 27
Total	2, 771. 23			284. 22	
Average	230. 94	7. 59	. 33	23. 69	10. 62

* Including 11.6 tons screenings.

Pumpage and consumption.

Month.	Pumpage. ^a		Consumption. ^b					Rainfall.		Average temperature.	
	Per month.	Per day.	Per month.	Per day.	Per capita per day. ^c		Per month.	Departure from normal.	Per month.	Departure from normal.	
1905.	<i>Cubic meters.</i>	<i>Cubic meters.</i>	<i>Cubic meters.</i>	<i>Cubic meters.</i>	<i>Liters.</i>	<i>U. S. gallons.</i>	<i>mm.</i>	<i>mm.</i>	<i>°C.</i>	<i>°C.</i>	
July -----	629,830	20,317	633,284	20,426	92.8	24.5	594.4	+203.7	26.5	—0.7	
August -----	625,724	20,185	639,524	20,630	93.8	24.8	212.8	—136.9	26.8	— .4	
September -----	631,628	21,054	632,207	21,074	95.8	25.3	239.6	—126.5	26.4	— .6	
October -----	688,510	22,210	702,895	22,671	103	27.2	172	—13.3	26.3	— .8	
November -----	729,768	24,326	712,228	23,741	107.9	28.5	10.5	—119.3	25.3	+ .3	
December -----	725,834	23,414	728,584	23,503	106.8	28.2	27.8	—30.9	25.5	-----	
1906.											
January -----	750,199	24,200	770,215	24,846	113	29.9	12.7	—15.3	25.1	-----	
February -----	736,917	26,318	728,396	26,014	118	31.2	13.4	+3.3	26.1	+ .6	
March -----	811,486	26,177	825,996	26,645	121	32	9.3	+8	26.8	— .1	
April -----	786,812	26,227	772,012	25,734	117	30.9	4.9	—26.1	29.2	+ .8	
May -----	764,834	24,672	739,434	23,853	108	28.6	338.4	+225.3	28.7	— .1	
June -----	561,913	18,730	563,813	18,794	84	22.6	154.9	—94.3	28.0	-----	
Total -----	8,443,455	-----	8,448,588	-----	-----	-----	1,790.7	—138.3	-----	-----	
Average -----	703,621	23,135	704,049	23,147	105.2	28	149.2	—11.5	26.76	— .08	

^a Estimated cylinder displacement with 40 per cent slip.^b Estimated at reservoir.^c Based upon a population of 220,000.*Collectible revenues.*

Month.	Water service.	Plumbing.	Fire plugs.	Fines.	Miscellaneous.	Total.
1905.						
July	P17,738.14	P514.65	P90.44	P252.00	-----	P18,595.23
August	16,389.37	762.24	88.47	-----	-----	17,240.08
September	15,417.16	568.01	87.96	-----	P48.12	16,121.25
October	17,037.35	632.95	83.17	212.00	417.10	18,382.57
November	14,805.55	654.70	82.70	-----	754.42	16,297.37
December	15,168.02	743.22	82.58	-----	1,392.42	17,386.24
1906.						
January	16,911.51	574.02	78.00	224.00	-----	17,787.53
February	16,185.32	763.47	78.00	-----	-----	17,026.79
March	17,876.87	1,212.26	74.96	-----	-----	19,164.09
April	17,633.35	949.75	69.66	366.00	-----	19,018.76
May	17,383.73	901.36	71.00	-----	-----	18,356.09
June	18,422.61	695.85	67.99	-----	-----	19,186.45
Total	200,968.98	8,972.48	954.93	1,054.00	2,612.06	214,562.45
Average	16,747.50	747.80	79.60	87.80	217.70	1,788.30
Total previous year	193,505.60	11,158.71	1,676.92	743.67	-----	207,084.90

Pipe installations.

Installation No.	Location.	Date.	Pipe laid (in meters).						Fire hy-drants set.	
			12 inch.	10 inch.	6 inch.	4 inch.	2 inch.	1½ inch.	A.	C.
68	New Quinta Bridge on Calle San Miguel	1905. Nov. 2-Nov. 14		161.3	16					2
68A	Calle Vidal, between No-zaleda and Concepción	Nov. 14-Nov. 23					382.2	240		
68B	Calle Timbugan and Alvarez	Dec. 7-Dec. 8				47.2				
68C	Provisional Ayala Bridge.	Dec. 11-Dec. 13	142							
68D	Calle Vidal, between Victoria and Magallanes.	Dec. 18-Dec. 26					580.7			
69	Calle California and Kansas Avenue	1906. Feb. 6-Feb. 12				236.5				
70	Calle I from Second to Third; G Street	Feb. 7-Feb. 14				107.4				
71	Third Avenue from H to G Street	Feb. 15-Feb.			74.2					
72	Valenzuela from Santa Mesa to end	Feb. 16-Mar. 17			421.9				3	
72A	Calle Poblete from San Jacinto to Claveria.	Apr. 16-Apr. 22				84.1				
73	Pennsylvania and Colorado Avenues and Oregon	May 9-May 28				750.1			2	
	Total		142	161.3	495.3	1,224.1	962.9	240	5	2

Installation No.	Location.	Number of valves placed.					Material.	Labor.	Transportation.	Engineering and superintendence.	Total.
		12 inch.	10 inch.	6 inch.	4 inch.	2 inch.					
68	New Quinta Bridge on Calle San Miguel		1				P2,317.59	P417.69	P91.30	P170.87	P2,997.45
68A	Calle Vidal, between No-zaleda and Concepción				2		1,124.03	188.55	18.88	23.97	1,355.43
68B	Calle Timbugan and Alvarez						122.27	29.80	7.75	11.85	171.67
68C	Provisional Ayala Bridge.	2					1,473.12	144.41	13.50	41.40	1,672.43
68D	Calle Vidal, between Victoria and Magallanes				1		958.16	159.30		55.76	1,173.22
69	Calle California and Kansas Avenue						774.81	172.45	14.92	83.44	1,045.62
70	Calle I from Second to Third; G Street						350.53	73.93	9.00	38.39	471.85
71	Third Avenue from H to G Street			1			428.12	83.93	13.17	50.82	576.04
72	Valenzuela from Santa Mesa to end						2,364.36	742.15	73.17	197.99	3,377.67
72A	Calle Poblete from San Jacinto to Claveria				1		249.88	81.28	10.23	53.67	395.06
73	Pennsylvania and Colorado Avenues and Oregon				5		2,161.09	596.35	115.90	187.27	3,060.61
	Total	2	1	1	6	3	12,323.96	2,689.84	367.82	915.43	16,297.05

Private fire service, by districts, in operation.

Month.	Intramuros.	Binondo.	Santa Cruz.	Tondo.	Quiapo.	San Miguel.	Dilao.	Ermita.	Malate.	San Nicolas.	Total.
1905.											
July.....	38	22	11	6	8	9	12	7	2	12	127
August.....	38	22	11	5	7	9	12	6	2	12	124
September.....	36	22	11	5	7	9	12	5	2	12	123
October.....	31	22	11	3	7	9	12	4	2	12	113
November.....	31	22	11	2	7	9	12	4	2	12	112
December.....	31	21	11	2	7	9	12	4	2	11	110
1906.											
January.....	31	21	11	2	7	9	12	4	2	11	110
February.....	31	21	11	2	7	9	12	4	2	11	110
March.....	31	14	10	2	7	9	12	4	2	11	102
April.....	31	14	9	2	7	11	12	4	2	11	103
May.....	31	13	8	2	7	11	12	4	2	11	101
June.....	31	13	7	2	7	11	12	4	2	11	100
New installation.....						2					2
Discontinued.....	7	9	4	4	1			3		1	29

Water service, by districts, in operation.

Month.	Intramuros.	Binondo.	Santa Cruz.	Tondo.	Quiapo.	San Miguel.	Sampaloc.	Dilao.	Ermita.	Malate.	San Nicolas.	Water boats.	Especials.	Total.
1905.														
July.....	312	503	584	205	312	133	315	92	427	142	594	24	1	3,644
August.....	313	506	598	210	316	132	323	94	433	141	606	25	3	3,700
September.....	319	508	604	210	315	132	330	94	436	145	608	25	3	3,729
October.....	322	512	613	211	315	132	333	94	539	146	610	27	3	3,757
November.....	320	514	617	213	316	133	335	94	442	147	614	28	3	3,776
December.....	328	518	622	212	320	132	336	96	447	147	624	28	2	3,812
1906.														
January.....	332	518	625	215	322	132	337	97	451	154	625	28	1	3,837
February.....	333	518	631	216	324	133	340	100	454	155	629	28	1	3,862
March.....	341	519	635	220	326	135	350	104	463	162	639	28	2	3,924
April.....	346	523	636	223	325	138	363	107	466	167	644	28	1	3,968
May.....	351	528	639	225	327	139	374	112	470	171	647	28	1	4,013
June.....	350	529	644	228	329	141	380	112	474	173	650	28	4	4,042
New installation.....	43	30	67	30	10	10	72	20	51	35	63	4	7	451
Discontinued.....	5	4	7	7	3	2	7		4	4	7		4	53
Increase over 1905.....	38	26	60	23	17	8	67	20	67	31	57	4	3	398

Installation of fire hydrants.

No.	Location.	Type.	Date.	Cost.	Pipe instal- lation No.
			1905.		
236	Calle Sande in front fire station -----	C.	July 13	P 225.48	-----
237	Calle Numancia -----	C.	Oct. 26	195.54	-----
238	Calle Urbiztondo, corner Elcano -----	C.	do	190.71	-----
239	Calle Prensa, corner Barcelona -----	C.	do	202.59	-----
240	Calle Anloague near Quinta Bridge -----	C.	Nov. 14	-----	68
			1906.		
241	Calle Valenzuela the First -----	A.	Mar. 17	-----	72
242	Calle Valenzuela the Second -----	A.	do	-----	72
243	Calle Valenzuela the Third -----	A.	do	-----	72
244	Calle Anloague, corner Hormiga -----	C.	Apr. 7	193.54	-----
245	Calle Norzagaray, corner Nueva -----	C.	do	201.04	-----
246	Calle San Jacinto, corner David -----	C.	do	157.18	-----
247	Calle Dasmariñas, corner Marquina -----	C.	do	188.57	-----
248	Calle Arranque, corner Lacoste -----	C.	Apr. 10	164.75	-----
249	Plaza Santa Cruz, corner Plaza Goiti -----	C.	do	210.64	-----
250	Calle San Jacinto, corner Quinones -----	C.	do	183.48	-----
251	Calle Gandara, corner San Jacinto -----	C.	do	181.97	-----
252	Calle Pennsylvania, corner California -----	A.	May. 28	-----	73
253	Calle Pennsylvania, corner Oregon -----	A.	do	-----	73
	Average cost per hydrant C -----			191.54	-----

Work done on distribution system.

Nature of work.	No.	Nature of work.	No.	Nature of work.	No.
Leaks stopped:		Replaced—Continued.		Raised—Continued.	
Mains -----	144	Boxes hydrant Type F -----	44	Boxes of hydrant -----	3
Gate valves -----	34	Hydrant Type G -----	2	Type F -----	3
Air valves -----	8	Boxes hydrant Type G -----	1	Hydrant Type G -----	3
Blow-off valves -----	5	Installed:		Gate valves -----	1
Hydrant—		Main -----	11	Relocated:	
Type A -----	33	Hydrant—		Hydrant—	
Type B -----	58	Type A -----	3	Type A -----	3
Type C -----	25	Type C -----	13	Type B -----	1
Type D -----	70	Type D -----	7	Type D -----	1
Type E -----	96	Type E -----	2	Type E -----	1
Type F -----	152	Type G -----	10	Type F -----	4
Type G -----	10	Removed:		Type G -----	2
Replaced:		Main -----	5	Blow-off valves -----	1
Hydrant—		Hydrant—		General repairs:	
Type A -----	1	Type A -----	1	Hydrant—	
Type C -----	1	Type D -----	48	Type A -----	12
Type D -----	23	Type E -----	1	Type B -----	1
Mains of hydrant Type -----		Type F -----	110	Type C -----	2
D -----	1	Lowered:		Type D -----	1
Hydrant Type E -----	29	Main -----	3	Type E -----	3
Mains of hydrant Type -----		Hydrant Type D -----	1	Type F -----	6
E -----	6	Boxes hydrant Type F -----	3		
Hydrant Type F -----	59	Raised:		Total -----	1,154
Lids of hydrant Type F -----	14	Hydrant—			
Frames hydrant Type -----		Type D -----	1		
F -----	61	Type F -----	12		

Meters in operation.

Meter.	Diameter.											
	½ inch.			¾ inch.			1 inch.			1½ inch.		
	In operation July 1, 1905.	Installed during year.	Total in operation.	In operation July 1, 1905.	Installed during year.	Total in operation.	In operation July 1, 1905.	Installed during year.	Total in operation.	In operation July 1, 1905.	Installed during year.	Total in operation.
Siemens-Halske	174	63	237	1,136	260	1,396	326	78	404	22	1	23
Taylor	19	19	38	400	3	403	234	—	234	50	—	50
Niagara	22	22	44	220	3	223	95	8	103	2	—	2
Ketterer	22	22	44	118	3	121	33	1	34	22	7	29
Crown	9	9	18	48	1	49	48	1	49	—	—	—
Meinecke	—	—	—	28	—	28	24	—	24	—	—	—
Meinecke Patent	1	1	2	53	3	56	25	—	25	2	—	2
Siemens Patent	17	17	34	38	—	38	13	1	14	1	—	1
Breslau	1	1	2	16	2	18	18	1	19	4	—	4
Lambert	1	1	2	38	2	40	3	—	3	—	—	—
Nash	1	1	2	10	1	11	17	2	19	1	—	1
Kennedy	—	—	—	1	—	1	2	—	2	—	—	—
Pittsburg	—	—	—	7	—	7	1	—	1	—	—	—
Hersey	2	2	4	1	—	1	1	—	1	—	—	—
Drop	—	—	—	—	—	—	1	—	1	—	—	—
Thonson	—	—	—	1	—	1	—	—	—	—	—	—
Empire	—	—	—	1	—	1	—	—	—	—	—	—
Frager	—	—	—	—	—	—	1	—	1	—	—	—
Bee	—	—	—	1	—	1	—	—	—	—	—	—
Worthington	1	17	18	—	27	27	4	8	12	—	—	—
Trident	—	1	1	—	1	1	—	1	1	—	—	—
Dreyer	—	1	1	—	7	7	—	6	6	—	—	—
Total	270	82	352	2,117	313	2,430	846	107	954	104	8	112

Meter.	Diameter.						Total.			Repaired.	Percentage repaired during year.	Ordered removed.	Percentage ordered removed during year.	
	2½ inch.		3 inch.		4 inch.									
	In operation July 1, 1905.	Total in operation.	In operation July 1, 1905.	Total in operation.	In operation July 1, 1905.	Installed during year.	Total in operation.	In operation July 1, 1905.	Installed during year.					Total in operation.
Siemens-Halske			8	8	14	1	15	1,778	413	2,191	268	12.2		
Taylor	1	1						787	3	790	257	32.5	6	0.75
Niagara								362	11	373	125	33.5	44	11.7
Ketterer								204	12	216	100	92	10	9.2
Crown								117	2	119	15	13.4		
Meinecke								52		52			9	17.3
Meinecke Patent								85	3	88	18	20.4		
Siemens Patent								70	1	71	11	15.4		
Breslau								43	3	46	18	39.1	1	2.1
Lambert								42	2	44	4	9		
Nash								31	3	34	5	14.7		
Kennedy								8		8	3	37.5		
Pittsburg								10		10	3	30	1	10
Hersey								4		4	1	25		
Drop								1		1				
Thonson								1		1				
Empire								1		1				
Frager								1		1	1		1	100
Bee								1		1				
Worthington								7	52	59	4	6.6	2	3.3
Trident									3	3				
Dreyer									14	14				
Total -----	1	1	8	8	14	1	15	3,605	522	4,127	833	20.1	74	1.7

Cost of maintenance, operation, and pumpage and delivery.

Month.	Pumping station.					Deposito and Santolan road.	
	Labor.	Coal.	Material.	Transportation.	Total.	Labor.	Material.
1905.							
July.....	P1,748.40	P2,697.55	P300.75	P75.00	P4,821.70	P2,041.06	P180.82
August.....	1,768.65	2,670.67	219.87	71.00	4,730.19	1,561.04	44.00
September.....	1,728.00	2,601.03	136.79	71.00	4,536.82	1,205.67	363.65
October.....	1,787.72	2,890.86	483.61	71.00	5,183.19	1,436.39	311.78
November.....	1,904.97	3,110.13	528.52	93.70	5,637.32	1,020.54	69.59
December.....	1,835.85	3,160.28	421.77	127.93	5,545.83	992.59	35.31
1906.							
January.....	2,311.99	3,232.80	668.11	95.00	6,307.90	1,034.03	68.16
February.....	2,305.96	2,913.23	^b 751.66	84.75	6,055.60	774.78	196.66
March.....	2,302.41	3,190.29	1,127.99	77.00	6,697.69	534.06	52.21
April.....	2,078.17	2,990.94	^c 2,764.82	77.00	7,910.93	457.25	^e 243.52
May.....	2,056.22	2,929.74	^d 2,497.15	71.00	7,554.11	516.14	2,532.56
June.....	1,783.49	2,405.17	^f 2,222.59	82.70	6,493.95	334.37	5.19
Total.....	23,611.83	34,792.69	12,073.63	997.08	71,475.23	11,907.92	4,103.45

Month.	Deposito and Santolan road.		Shops.			
	Transportation.	Total.	Labor.	Material.	Transportation.	Total.
1905.						
July.....	P1,630.00	P3,851.88	P2,281.89	P877.10	P288.60	P3,387.59
August.....	^a 2,037.50	3,642.54	2,449.06	477.67	249.38	3,176.11
September.....	217.50	1,786.82	2,161.54	546.83	276.50	2,984.87
October.....	76.00	1,824.17	2,784.89	806.29	390.90	3,982.08
November.....	65.70	1,155.83	2,731.74	1,461.47	241.50	4,434.71
December.....	71.83	1,099.73	2,446.71	660.72	240.44	3,347.87
1906.						
January.....	55.00	1,157.19	2,445.12	1,428.68	252.00	4,125.80
February.....	^a 58.75	1,030.19	2,013.30	393.63	240.58	2,647.51
March.....	1,167.50	1,753.77	2,162.55	639.68	243.86	3,046.09
April.....	^a 1,565.00	2,265.77	1,898.89	573.90	217.49	2,690.28
May.....	^a 1,534.00	4,582.70	2,042.81	394.25	159.28	2,596.34
June.....	376.00	715.56	2,333.94	490.29	245.00	3,069.23
Total.....	8,854.78	24,866.15	27,752.44	8,750.51	2,985.53	39,488.48

Month.	Office.			Total.
	Labor.	Transportation.	Total.	
1905.				
July.....	P2,000.88	P80.08	P2,080.96	P14,142.13
August.....	1,663.54	80.60	1,744.14	13,292.98
September.....	1,785.92	144.74	1,930.66	11,239.17
October.....	1,586.56	133.42	1,719.98	12,709.42
November.....	1,178.31	46.21	1,224.52	12,452.38
December.....	1,437.42	63.36	1,500.78	11,494.21
1906.				
January.....	1,693.02	80.22	1,773.24	13,364.13
February.....	1,435.51	27.58	1,463.09	11,196.39
March.....	1,691.56	35.52	1,727.08	13,224.63
April.....	1,538.98	48.00	1,586.98	14,453.96
May.....	1,482.21	45.28	1,527.49	16,260.64
June.....	1,521.43	39.20	1,560.63	11,839.37
Total.....	19,015.34	824.21	19,839.55	155,669.41

^a Cost of hauling coal included.

^b P250.00 added to materials for repair of boilers.

^c P2,100 added to materials for repair of boilers.

^d P2,000 added to materials for repair of boilers.

^e Includes P2,468.65 for sacks and twine for 3,000 tons of coal previously delivered.

^f Includes P1,795 for repair to boiler D, not yet paid for.

Annual variations in water supply and cost and income of same.

Year.	Number of services.	Paid consumption.	Unpaid consumption.	Leakage and losses.	Total.	Expenditures.	Receipts.
1905 -----	3,647	<i>Cu. meters.</i> 4,014,963	<i>Cu. meters.</i> 4,258,756	<i>Cu. meters.</i> 5,767,916	<i>Cu. meters.</i> 14,041,635	₱151,937.08	₱206,619.24
1906 -----	4,042	4,106,757	3,509,637	3,529,417	11,145,745	*155,669.41	214,562.45
Increase or decrease ---	395	91,794	769,119	2,238,499	2,895,890	3,732.33	7,943.21

*Expenditures for 1906 include ₱6,245 paid for repair to boilers damaged during fiscal year 1906.

Cost of regular sewer cleaning and repair for the year 1906.

Month.	Number of jobs.	Materials.	Labor.	Inspection.	Transportation.	Total.
1905.						
July -----	62	₱247.31	₱2,025.75	₱427.58	₱15.94	₱2,716.58
August -----	70	397.59	2,360.53	344.62	62.43	3,165.17
September -----	48	318.15	1,016.36	265.54	15.00	1,615.05
October -----	47	216.18	1,293.42	383.47	13.60	1,906.57
November -----	37	1,928.24	190.99	270.00	14.75	2,403.98
December -----	49	72.38	1,281.59	90.00	40.30	1,484.27
1906.						
January -----	46	33.29	588.50	109.27	4.64	735.70
February -----	21	2.79	322.65	81.85	3.36	410.65
March -----	19	9.36	209.92	83.52	4.80	307.60
April -----	36	13.53	249.05	22.28	3.84	288.70
May -----	30	8.85	503.53	50.47	6.82	569.67
June -----	26	76.88	532.43	65.69	16.66	691.66
Total -----	491	3,324.55	10,574.72	2,194.29	202.04	16,295.60

Average cost per job, ₱33.19.

Cost of storm-water drain construction for the year 1906.

Job No.	Location of sewers.	Month.	Total length in meters.	Size of sewers, in meters.	Total cost of materials.	To the contractor.
46	Opposite Bustillos Street, Alix Street to Estero Sampaloc.	February -----	56	*0.60	₱415.17	-----
47	Callejon at juncture of Alix and Iris, from Alix to Estero Sampaloc.	March -----	41	*.40	443.69	-----
48	Bulkhead to Malecon Drive	Feb.-April ---	270	(b)	-----	₱29,000.00
49-55	Santa Monica, Nueva, D. and Padre Faura Streets	Mar.-May -----	-----	(d)	4,625.25	10,844.53
56	Rear of Elks' clubhouse, Luneta to Isaac Peral Street	Mar.-April ---	135	*.60	1,511.53	-----
57-63	Soler, Misericordia and to Estero de Trozo*	June -----	-----	(d)	1,027.40	6,483.05
Total -----	-----	-----	-----	-----	8,023.04	46,327.58

Job No.	Location of sewers.	Labor.	Transportation.	Engineering and superintendence.	Total cost.
46	Opposite Bustillos Street, Alix Street to Estero Sampaloc	₱150.91	₱6.00	₱40.34	₱200.24
47	Callejon at juncture of Alix and Iris, from Alix to Estero Sampaloc	138.15	12.30	35.22	*629.36
48	Bulkhead to Malecon Drive	-----	-----	789.23	29,789.23
49-55	Santa Monica, Nueva, D. and Padre Faura Streets	-----	-----	507.95	15,977.73
56	Rear of Elks' clubhouse, Luneta to Isaac Peral Street	562.75	55.64	150.99	2,280.91
57-63	Soler, Misericordia and to Estero de Trozo*	-----	-----	211.72	7,722.17
Total -----	-----	859.81	73.94	1,735.45	57,019.82

*Circular. bSpecial. cActual cost, ₱33,522.76. dSpecial sections. eUnfinished.

Boiler inspection during the fiscal year.

Month.	Number of inspec- tions.	Horse- power.	Fees.		
			Collect- ible.	Noncol- lectible.	Total.
1905.					
July.....	26	1,582	₹154	₹92	₹246
August.....	27	1,295	120	124	244
September.....	20	1,377	130	70	200
October.....	10	314	40	44	84
November.....	8	725	36	48	84
December.....	6	161	12	50	62
1906.					
January.....	17	1,853	90	110	200
February.....	7	230	28	52	80
March.....	9	115	64	26	90
April.....	26	2,439	156	92	248
May.....	17	608	164	28	192
June.....	13	174	76	12	88
Total.....	186	8,546	1,070	748	1,818

Cost of labor and work performed.

Month.	Cost of labor.	Cubic meters of stone crushed.
1905.		
July.....	P3,399.40	3,499
August.....	3,304.10	4,877
September.....	3,228.10	4,266.5
October.....	3,597.60	4,117
November.....	3,157.40	3,268
December.....	3,059.60	5,081
1906.		
January.....	3,296.80	4,307.48
February.....	2,922.60	4,099.96
March.....	4,193.40	5,242.5
April.....	4,215.10	3,892
May.....	4,723.55	3,686.59
June.....	3,769.45	3,617
Total.....	42,867.10	49,954.03

Cubic meters of material towed by the launches Washington and Jan.

Month.	Broken stone.	Screenings.	Refuse stone.	Gravel.	Total.
1905.					
July.....	2,433	461	605	-----	3,499
August.....	3,307	549	1,021	-----	4,877
September.....	3,314.50	642	310	-----	4,266.50
October.....	3,058	517	542	450.49	4,567.49
November.....	2,269	539	60	1,613.40	4,881.40
December.....	3,315	566	-----	895	4,776
1906.					
January.....	3,414.48	268	625	885	5,192.48
February.....	3,531.14	477.02	91.80	390	4,489.96
March.....	4,069.76	434	479.50	719	5,702.26
April.....	3,338	176	378	2,002.51	5,894.51
May.....	2,831	223	107	422	3,583
June.....	2,750	-----	178	-----	2,928
Total.....	38,030.8	4,852.02	4,397.30	7,377.40	54,657.60

Location, character, and cost of cement curbs and cement sidewalks installed.

Street.	Cement walks.			Cement curbs.		
	Square meters.	Cost per unit.	Total cost.	Linear meters.	Cost per unit.	Total cost.
Paco fire station.....	121	P2.25	P272.25			
Concepción.....				661.5	P1.86	P1,223.78
Cervantes.....	155	2.49	385.95	36	1.82	65.52
Soler.....				105	1.56	163.80
Herran.....	30	3.16	94.80	18.5	3.36	62.16
Dee Street.....	34.5	3.15	107.99	26.3	1.94	51.02
Binondo Lift Bridge.....	305	2.80	854.00	241	3.24	780.84
Nueva.....				194.3	2.06	400.26
San Marcelino.....				39.2	1.86	72.91
District No. 1.....				658	1.60	1,052.80
Padre Faura.....				179	1.95	349.05
Front post-office.....				145.48	1.72	250.23
Approach San Miguel Bridge.....				110	1.85	203.50
Tanduay.....	139	2.63	365.57	74	1.79	132.46
Bagumbayan.....	280.2	3.00	840.60	1,904.8	1.54	2,933.39
General Solano.....	39	2.20	85.80	480	1.75	840.00
Total.....	1,103.7	2.724	3,006.96	4,873	1.76	8,581.72

Work performed on streets during period from July 1, 1905, to July 1, 1906.

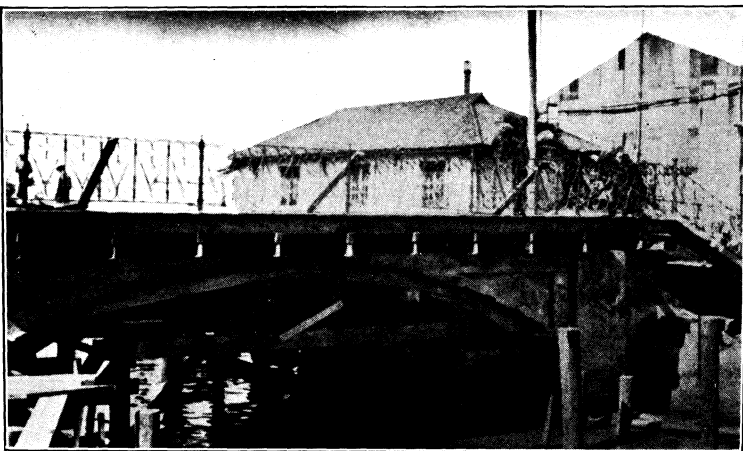
Nature of work.	Quantity.	Nature of work.	Quantity.
Streets resurfaced.....square meters.	190,094.60	Cement sidewalk laid.....sq. meters.	1,103.70
Streets patched.....do.	170,673.50	Box gutters laid.....linear meters.	4,491.33
Streets graveled.....do.	43,722	Stone gutters laid.....do.	8,389.90
Streets macadamized.....do.	77,952.50	Cement gutters laid.....do.	11,111
Block pavement laid.....do.	4,417	Excavation.....cubic meters.	3,425.80
Block pavement pitched.....do.	10,972	Filling.....do.	22,712.26
Cement curb laid.....linear meters.	4,873	Wall construction.....do.	1,088.30

Cost of maintenance of streets.

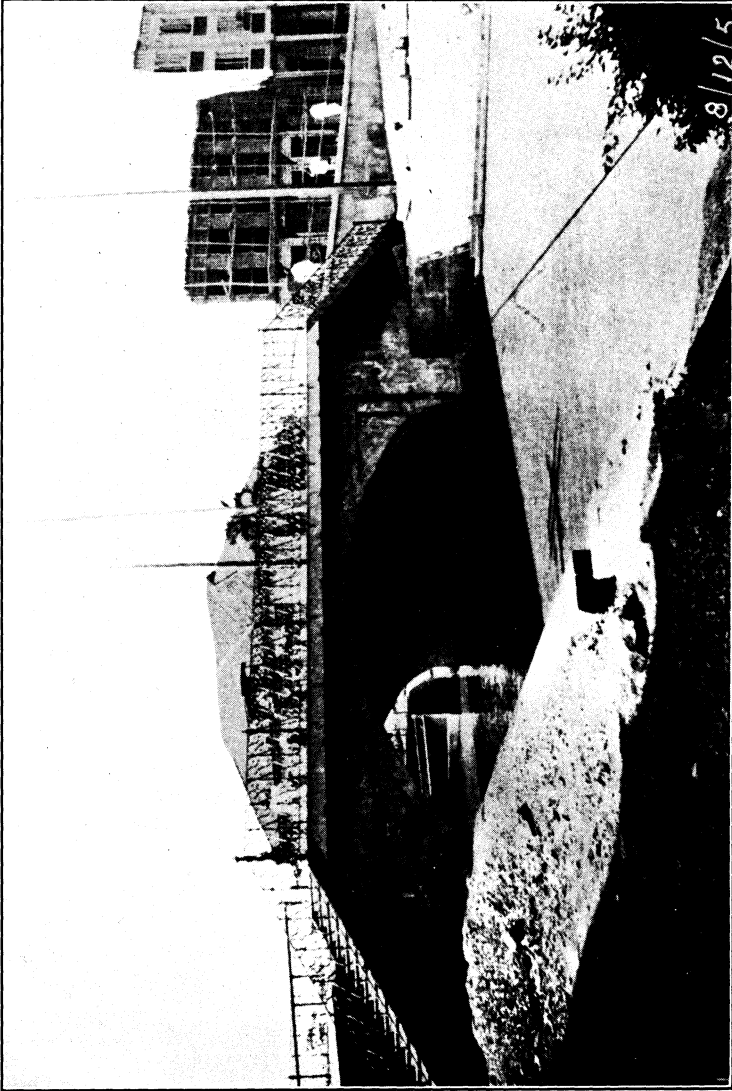
Streets.	From—	To—	Total cost.
Azcarraga.....	Bay.....	Palomar Bridge.....	P12,081.80
Alvarez.....	Oroquieta.....	San Lazaro Estero.....	507.37
Alix.....	Plaza Santa Ana.....	Rotonda.....	2,286.59
Antonio Rivera.....	Azcarraga.....	Tayuman.....	3,047.93
Aviles.....	Malacañang.....	Rotonda.....	925.64
Alley off Malacañang.....			367.41
Approach Bridge of Spain.....			9,037.13
Albuquerque.....	Padre Herrera.....	Padre Rada.....	256.64
Acuña.....	Azcarraga.....	Aceiteros.....	1,499.16
Aceiteros.....	Barcelona.....	Ilaya.....	623.00
Agno.....	Sandejas.....	San Andres.....	753.37
Approach Ayala Bridge.....			3,179.76
Approach Santa Cruz Bridge.....			613.84
Approach Binondo Lift Bridge.....			11,997.80
Approaches San Miguel Bridge.....			843.66
Bagumbayan.....	Lawton Plaza.....	Luneta.....	10,292.01
Beaterio.....	San Juan de Letran.....	Arzobispo.....	220.71
Balic-balic.....	Castafios.....	City limits.....	739.75
Bilibao.....	Zaragoza.....	Padre Herrera.....	769.78
Bustos.....	Plaza Santa Cruz.....	Dulumbayan.....	210.43
Beata.....	Parallel to Beata Canal.....		386.58
Barbosa.....	Globo de Oro.....	Escaldo.....	1,045.13
Barcaistegui.....	Malacañang.....	Tanduay Estero.....	1,026.83
Bustillos.....	Alix.....	San Anton.....	3,381.73
Cervantes.....	Bilibid.....	Quiricada.....	5,373.51
Concepcion.....	Bagumbayan.....	Marquez de Comillas.....	7,056.31
Crespo.....	San Roque.....	San Sebastian.....	241.60
Cementerio.....	Pandacan.....		359.64
Concepcion.....	Norazaray.....	Curtidor Estero.....	1,150.68
Cementerias.....	Corazon Jesus.....	Beata.....	240.58
Camta.....	San Fernando.....	Azcarraga.....	297.88
Castillejos.....	Duque de Alba.....	Alejandro Farnesio.....	297.82
Canonigo.....	San Marcelino.....	Canonigo Bridge.....	410.00



SAN MIGUEL CONCRETE STEEL-ARCH BRIDGE IN CONSTRUCTION.



SAN MIGUEL CONCRETE STEEL-ARCH BRIDGE IN CONSTRUCTION.



SAN MIGUEL CONCRETE STEEL-ARCH BRIDGE.



CALLE TANDUAY BEFORE REMOVAL OF BRIDGE AND LOWERING OF PIPE LINE.



CALLE TANDUAY AFTER REMOVAL OF BRIDGE AND LOWERING OF PIPE LINE.



SEWER CONSTRUCTION, CALLE SOLER.

Cost of maintenance of streets—Continued.

Streets.	From—	To—	Total cost.
Cortada	Nueva	Real	P 272.48
Dee	Padre Faura	Cementerio	3,470.12
Diaz	Gral. Izquierdo	Union	3,098.86
Dulumbayan	Echague	Billibid	1,318.95
Divisoria	Nueva	Beach	1,678.15
Duque	Quifones	Meisic Canal	216.59
District No. 1			8,560.20
District No. 2			15,669.16
District No. 3			19,750.71
District No. 4			10,278.35
Echague	Plaza Goiti	Quinta Bridge	1,536.62
Escolta	Plaza Moraga	Santa Cruz Plaza	284.54
Elizondo	Crespo	San Miguel Bridge Estero	652.80
Espinosa	Novaliches	Pasig River	352.98
Front post-office			897.57
Fajado	Lemery	Reina Estero	643.80
General Solano	Casal	Malacañang	2,093.43
Globo de Oro	Echague	Gunao	562.70
Gunao	San Geronimo	Globo de Oro	594.59
General Supervision			6,255.48
Herran	Real	Nozaleda	340.79
Hospital	Bagumbayan	Arroceros	543.24
Isaac Peral	Bay	End of street	889.85
Intendencia Square			240.80
I	Second Avenue	Third Avenue	248.70
Isabela Gate			269.92
Isla de Romero	Echague	Orozo	523.92
Ilaya	Lemery	Leon XIII Plaza	440.77
Jaboneros	Principe	Binondo Canal	2,602.82
Lopez de Vega	Timbugan	Felix Huertas	1,417.51
Lopez Vega, Paco Paz		Santiago	356.08
Luneta			995.23
Lemery	Jolo Bridge	Pretil Bridge	1,196.00
Lardizabal	Bustillos	End of street	373.15
Luzon	Magdalena Este	San Lazaro Estero	344.00
Mercado	Bay	Real	2,002.15
Manrique	Lardizabal	Bustillos	272.70
Merced	Rosario	San Gregorio	953.30
Malacañang	General Solano	Aviles	735.38
Maestranza Dock			431.00
Magallanes	Santo Tomas	Recoletos	3,611.58
Magdalena	General Izquierdo	Cervantes	8,683.46
Malecon	Luneta	Pasig River	3,082.62
Muelle del Rey			287.85
Nueva	San Luis	End of street	15,480.25
Nozaleda	Bagumbayan	Herran	3,660.52
Norzagaray	Echague	San Miguel Estero	624.36
Olivares	Anloague	Rosario	299.92
Palomar	Azcarraga	Bridge	367.13
Padre Casal	General Solano	Novaliches	238.63
Plaza Miranda			316.10
Principe	Muelle del Rey	Lavezares	629.68
Padre Faura	Nozaleda	Bay	694.57
Padre Rada	Lemery	Beach	1,652.03
Alvarado	Azcarraga	Soler	243.06
Plaza Lawton			993.88
Paz (Paco)	Rosario	End of street	1,047.46
Plaza Santa Ana			1,898.46
Pescadores	Azcarraga	Bay	875.22
Plaza Santa Cruz			1,166.29
Parian Gate			1,040.85
Peñafrancia	Rosario	Visita	691.39
Herrera	Beach	Reina Estero	300.10
Perdigon	Paz	Peñafrancia	588.95
Paco fire station			285.21
Plaza Calderon de la Barca			446.78
Platerias	Carriedo	Noria	406.17
Palma	Crespo	Noria	298.17
Quiotan	Carriedo	Estero Cegado	1,152.98
Rodriguez Arias	Malacañang	End of street	1,306.34
Revelin	Real	City limits	541.24
Real	Paco Bridge	De las Damas Bridge	5,229.02
Rotonda			284.81
Remedios	Real	Beach	2,414.77
Ricafort	Estero	Lemery	376.23
Santo Tomas	Solana	Cabildo	225.30
San Roque	Alcala	Echague	813.95
Santo Cristo	San Fernando	Aceteros	1,451.81
San Juan road			1,800.11
Santa Mesa	Alix	Valenzuela	2,172.12
San Lazaro	Quiricada	Sangleyes	2,215.23
San Pedro Macati road			223.68

Cost of maintenance of streets—Continued.

Streets.	From—	To—	Total cost.
Santa Rosa	Norzagaray	Curtidor Estero	₱585.35
San Marcelino	Concepcion	Herran	3,898.25
Santa Maria	Real	Santa Ana Church	5,686.00
Soler	Azcarraga Bridge	Estero Cegado	2,589.00
Sangleyes	Cervantes	Chinese Hospital	572.55
San Gregorio	Peñafrancia	Paco Estero	434.52
Sandejas	Lico	City limits	215.72
Street to cable station			322.13
Salcedo	Carriedo	Bilibid	1,587.00
San Antonio	Paz	Peñafrancia	529.21
Santa Monica	Azcarraga	Tayuman	2,656.48
Soledad	Binondo	Azcarraga	464.50
Santo Sepulcro	Paz	End of street	513.65
San Jose	San Luis	Gallera	545.27
San Fernando	Santo Cristo	Barcelona	677.88
Sampaloc market			328.04
San Pedro	Miranda Plaza	Bilibid	3,196.96
San Andres	Manila Bay	Singalong	5,569.33
Tool house, San Sebastian			615.84
Timbugan First	Paz	Quiricada	869.72
Tetuan	Plaza Santa Cruz	Trozo Estero	881.79
Tabora	Azcarraga	Aceiteros	1,050.02
Union	Rosario	San Gregorio	903.55
Urtado	Market	Estero	514.65
Velasquez	Pavia	Bancusay	2,449.80
Villalobos	Crespo	Echague	595.09
Vives	San Gregorio	Paco Church	337.89
Valenzuela	Santa Mesa	Barracks	2,214.20
Zaragoza	Fulgueras	Beach	321.41
Novaliches	Casal	Malacafang	3,537.69
Total			289,721.90

General repairs made to bridges during the year.

Bridge.	Class of work.	Cost.
Spain	Installed new floor, 8 stringers, sidewalk of tacal, scraping and painting; building retaining wall, 60 meters long, 141 cubic meters masonry, 96 linear meters iron railing.	₱4,659.57
Blanco	Repairing railings and rebuilding walks and scraping and painting.	826.71
San Marcelino	Repairs to arch and abutment	596.42
Balic-Balic	Repairs to abutments and putting in new stringers and floor.	255.39
Azcarraga	New floor and stringers of Oregon pine	822.09
Pretil Foot	New footbridge	147.54
Palomar	New floor and stringers of Oregon pine, repairs to abutment and facing up walls.	2,592.93
Iris	New stringer and braces, and repairing abutments.	246.68
San Miguel Foot	Construction of a temporary footbridge	236.46
San Miguel	Building wall	200.08
Old Ayala Bridge	General repairs to floor, trusses, iron work, etc.	718.89
New Ayala	Building retaining walls, south and north approaches (1,314 cubic meters of masonry).	6,565.51
Binondo Lift	Construction of foundation	10,419.06
Do	Operation and minor repairs	1,543.15
Azcarraga, Iris, Palomar, Comillas, Blanco, Santa Ana, Balic-Balic, Gandara, San Antonio, Carballo, Mendoza, San Rafael, Tanque, Chinesco, Magdalena, Santa Mesa, San Gerónimo, Tandauay, Pretil, Spain, Tayuman, Paco, Pandacan, Castillejos, San Luis, Vitas, and Palompong.	General repairs and painting with coal tar	4,163.08
Colgante	General inspection	24.83
Miscellaneous	Putting in retaining wall Sampaloc market	373.73
Do	General repairs Paco tool house	334.84
Do	General repairs to river walls	205.74
Do	Making 500 cement monuments for drafting room	198.66
Do	Dredging Reina Estero near Calle Fajardo	705.97
Do	1,346 new street signs installed	674.95
Do	General supervision	3,412.30
Total		39,924.53

Private building construction and repairs, by months.

Month.	Applications received.	Strong materials.				New buildings, light materials.	
		New buildings.		Repairs.			
		Per-mits.	Value.	Per-mits.	Value.	Per-mits.	Value.
1905.							
July-----	535	40	₹115, 125	79	₹9, 048	187	₹18, 640
August-----	454	69	84, 520	77	22, 785	136	13, 113
September-----	446	80	390, 500	92	21, 615	112	14, 855
October-----	966	137	173, 050	133	30, 920	158	23, 500
November-----	585	118	138, 790	95	33, 692	205	22, 785
December-----	495	118	136, 841	64	11, 762	195	24, 970
1906.							
January-----	588	168	154, 390	59	24, 286	156	20, 485
February-----	583	51	132, 945	57	41, 000	197	26, 495
March-----	612	52	137, 905	65	25, 421	175	26, 035
April-----	552	48	175, 885	54	20, 646	121	17, 905
May-----	754	50	130, 625	79	40, 744	130	22, 165
June-----	700	42	90, 225	118	15, 227	113	18, 025
Total-----	7, 270	973	1, 860, 801	972	297, 146	1, 885	248, 973

Month.	Repairs, light materials.		Obstruction of streets.	Building lines.	Billboards.	Total permits issued.	Fees collected.
	Permits.	Value.					
1905.							
July	158	6,480				464	1,011.43
August	90	4,018				372	1,030.09
September	81	3,870				365	1,187.07
October	295	14,795				723	1,658.27
November	163	9,640				581	1,355.30
December	86	5,410				463	1,131.15
1906.							
January	118	9,510	2		6	509	1,999.97
February	159	13,980	2	2		468	1,849.56
March	193	16,328	11	4	1	501	1,951.19
April	194	13,502	5	2	1	425	1,753.96
May	314	21,590	4		4	581	1,714.37
June	298	16,545	3	1	11	586	1,293.96
Total	2,149	135,668	27	9	23	6,038	17,936.32

Private building construction, repairs, and condemnation, by districts.

District.	Strong materials.				
	New buildings.		Repairs.		Con- demned and re- moved.
	Permits.	Value.	Permits.	Value.	
Binondo -----	84	₱112, 245	197	₱85, 700	5
Ermita -----	137	520, 370	57	20, 521	2
Intramuros -----	38	65, 250	89	27, 629	3
Malate -----	86	167, 930	27	5, 135	-----
Paco -----	21	64, 910	23	4, 945	-----
Pandacan -----	4	22, 120	1	25	-----
Sampaloc -----	110	172, 935	62	18, 193	3
Santa Ana -----	3	53, 300	3	1, 000	-----
Santa Cruz -----	174	163, 360	136	26, 140	10
San Nicolas -----	99	175, 215	205	67, 691	22
San Miguel -----	41	70, 931	46	11, 985	4
Quiapo -----	53	93, 940	75	16, 055	3
Tondo -----	123	178, 295	51	12, 127	3
Total fiscal year 1906 -----	973	1, 860, 801	972	297, 146	55
Total fiscal year 1905 -----	1, 055	3, 055, 659	982	423, 899	31
Difference -----	— 82	—1, 194, 858	— 10	—126, 753	+24

Private building construction, repairs, and condemnation, by districts—Continued.

District.	Light materials.				
	New buildings.		Repairs.		Condemned and removed.
	Permits.	Value.	Permits.	Value.	
Binondo					28
Ermita					116
Intramuros					
Malate	245	P33,373	265	P15,593	25
Paco	183	29,990	215	11,868	43
Pandacan	33	4,850	35	1,840	1
Sampaloc	507	77,660	517	47,582	93
Santa Ana	62	9,165	73	4,620	9
Santa Cruz	192	24,730	264	15,405	42
San Nicolas					84
San Miguel					75
Quiapo					19
Tondo	663	69,205	780	38,760	261
Total fiscal year 1906	1,885	248,973	2,149	135,668	796
Total fiscal year 1905	2,348	325,568	1,050	54,526	629
Difference	— 463	— 76,595	+1,099	+ 81,142	+167

Statement of cost of repairing and lighting public buildings, exclusive of markets.

Building.	Lighting.	Repairs.	Building.	Lighting.	Repairs.
City Hall	P505.08	P1,195.24	Luneta band stands	P99.64	P301.62
Slaughterhouse	72.36	179.71	Binondo band stands		64.97
City stables No. 1	1,982.50	1,401.08	S. S. Pluto	573.15	19.39
City stables No. 2	888.20	196.09	Botanical Gardens		1.89
Headquarters fire department	1,271.86	172.07	City parks		341.77
San Nicolas fire station	662.63	170.33	City pound		105.68
Tondo fire station	214.08	5.61	Crematory:		
Paco fire station	300.33	428.53	Palomar		2,377.62
Intramuros fire station	337.02	50.80	Paco		16.18
Cervantes fire station		752.99	Santa Cruz		121.13
Tanduay fire station	981.30	299.88	Midden sheds		243.49
Maestranza dock	159.00		Veterinary hospital		.68
Anloague metropolitan police station	318.07		Warehouse, department city schools		33.13
Santa Cruz metropolitan police station	371.16	17.82	School of Domestic Science		96.22
Sampaloc metropolitan police station	558.89	54.18	American School		226.58
River and harbor police	409.76	235.05	Malate School		268.86
Luneta police station	2,792.82	981.42	Gagalangin School		21.01
Anloague native police station	62.74	23.33	Asuncion Chinese School	49.39	48.70
San Pedro native police station	253.08	8.33	Girls Public School, Quiapo	32.00	42.65
Sampaloc native police station	283.11		Trozo School, Calle Latorre	30.04	9.29
Paco native police station	563.12	90.78	Santa Cruz School, 608 Bilibid		21.80
Tondo native police station	315.60	414.74	Quiapo School, Calle Gunao		39.71
Police court		200.39	Quiapo School, Calle San Geronimo		9.58
Internal-revenue building	1,369.10	326.22	Ermita School, 136 Calle Real		19.93
Audiencia Bajos	214.65	222.07	School Plaza Santa Ana		96.46
City shops	149.52	840.43	Total	15,820.20	12,795.43

Cost of operating, cleaning, and care of markets, etc.

Market.	Materials for cleaning.	Labor, cleaning and caring.	Lighting.	Rents.	Repairs.	Total.
Divisoria -----	P586.45	P5,677.00	P2,400.00		P927.77	P9,591.22
Quinta -----	385.33	3,808.80	1,227.00		2,171.29	7,592.42
Arranque -----	287.30	3,309.60	420.00	P4,571.28	*3.40	8,591.58
Sampaloc -----	116.75	1,238.00	32.00	1,080.00	*57.86	2,524.61
Herran -----	113.35	1,777.40	(b)		7.04	1,897.79
Anda -----	38.60	1,246.00	354.33		4.58	1,643.51
Gagalangin -----	7.40	292.00	(b)	130.08	(*)	429.48
Santa Ana -----	5.30	292.00	(b)	144.00	*63.17	504.47
Pandacan -----	7.20	292.00	(b)		74.34	373.54
Matadero -----	(c)	(c)	916.20		179.71	1,095.91
Total -----	1,547.68	17,932.80	5,349.53	5,925.36	3,489.16	34,244.53

*Land only.

^bNo lights required.^cExpense borne by the Bureau of Internal Revenue.

List showing the new and old buildings in which plumbing has been installed, overhauled, or remodeled since June 30, 1906.

District.	1905.						1906.					
	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
San Nicolas -----	5	6	2	1	3	4	4	6	5	3	7	3
San Miguel -----	2	2	3	1	3	3	4	3	6	5	1	1
Santa Cruz -----	1	3	1	10	7	2	5	4	10	5	9	9
Sampaloc -----	6	6	5	11	5	10	5	4	3	3	5	9
Intramuros -----	2		1	1	2	1	5	2	2	2	4	3
Binondo -----	3	4	5	3	11	5	12	9	6	2	4	4
Ermita -----	7	8	10	5	16	9	13	8	13	5	5	5
Malate -----	4	1	5	3	5	4	4	4	3	3	7	6
Quiapo -----	2	2	5	1	12	5	2	8	4	4	3	6
Tondo -----		4	2	1	3	1	1	7	4	6	7	6
Paco -----	2				1	1	1	1		2	3	2
Pandacan -----	1								2			
Santa Ana -----							1	1				
Total -----	35	36	39	37	68	45	57	57	58	40	55	54

Grand total, 581 houses.

The above does not include the plumbing work installed in military, Insular, or municipal buildings.

Distribution and cost of jobs completed (city shops).

Department.	Number of jobs.	Cost.			Total.
		Labor.	Material.	Superin- tendence.	
Law -----	15	P144.31	P82.17	P22.63	P249.11
City assessor and collector -----	1	6.65	18.38	2.50	27.53
Municipal Board -----	20	44.44	20.03	6.45	70.92
Public works, city of Manila -----	3	685.31	2,207.96	282.15	3,175.42
Police -----	22	244.61	77.80	32.08	354.49
Bureau of Architecture -----	4	55.96	68.16	8.81	132.93
Fire -----	66	763.88	718.97	135.37	1,618.22
Sewer and waterworks construction -----	31	443.99	559.67	94.69	1,098.35
Sanitation and transportation -----	1,537	28,783.87	30,822.11	5,458.11	65,064.09
Engineering and public works -----	682	30,162.62	21,565.85	438.47	52,164.94
Total -----	2,411	61,335.64	56,141.10	6,479.26	123,956.00

Expenditures of the department during the fiscal year 1906.

Item.	Amount.	Item.	Amount.
SALARIES AND WAGES.			
Salaries, building and plumbing inspection	₱35,029.26	Incidental expenses	₱568.90
Labor, buildings and plumbing inspection:		Maintenance, repairs, and supplies, barges, launches, road rollers, and scows	82,825.75
School janitors	₱11,251.75	Repairs, Cuartel Meisse	468.47
Market laborers	15,052.70	Printing and binding:	
Janitors public buildings, including police stations	8,921.40	General office	₱583.13
		Drafting and surveys	74.02
		Water supply	1,099.52
		Street construction	332.87
		Building inspection	310.91
		City shops	149.44
	35,225.85		2,549.89
Salaries, boiler inspection	3,600.00	Purchase pump and boiler, rock quarry	2,140.05
Salaries, drafting and surveys	17,513.79	Repairs, pumping machinery	859.54
Labor, drafting and surveys	10,544.80	Purchase of pitch for street repair	6,680.00
Expenses of Desmond Fitzgerald from Manila to United States	793.00	Postage and telegrams	53.00
Salaries, general office	33,682.77	Repairs, launches and equipment not made at city shops	10,199.69
Inspectors, temporary, building inspection	1,708.66	Rents:	
Salaries, street construction and bridges	49,069.70	School buildings	₱51,580.16
Labor, street construction and bridges:		Police stations	4,200.00
Streets	₱100,221.95	Lands	9,910.56
Stone scows	37,286.25		65,690.72
Quarry	47,687.55	Purchase of material for streets and bridges	38,928.31
	185,195.75	Repairs, sewers and drains	11,229.42
Salaries, repair shops	38,218.48	Janitors' supplies	8,362.50
Labor, repair shops	6,757.27	Repairs, Santolan road	7,984.50
Salaries, sewers	3,685.02	Purchase of materials for street signs and numbers	110.93
Salaries, water supply	42,900.81	Subsistence for launch crews	373.70
Labor, water supply:		Telephone service	1,437.68
Shops	₱23,630.65	Purchase of tools and miscellaneous supplies:	
Deposito	4,206.88	Water supply	₱14,816.24
Pumping station	10,969.96	Street construction and bridges	13,365.59
	38,807.49	Buildings and plumbing inspection	51.81
		City repair shops	1,685.30
Total for salaries and wages	502,732.59		29,918.94
CONTINGENT EXPENSES.		Transportation on official business:	
Advertising	4.86	General office	₱1,119.88
Repairs to markets and municipal buildings	23,331.18	Drafting and surveys	7,082.94
Repairs to bridges	28,648.19	Water supply and sewers	16,958.90
Operating dredge cleaning esteros	3,188.60	Street construction and bridges	64,335.39
Material for maintenance and repairs electrical service	777.71	Buildings and plumbing inspection	5,444.93
Electrical service, public buildings, parks, and streets:		City repair shops	733.56
Electrical service, streets, harbor, and parks	₱86,683.60		95,675.60
Electrical service, public buildings	21,432.45	Expense closing wells for sanitary reasons	1,113.26
	108,116.05	Total for contingent expenses	597,961.40
Purchase and repair office furniture and supplies	5,080.99	Aggregate	1,100,693.99
Purchase, fuel, oil, and other engine supplies:			
For launches	₱13,590.62		
For quarry	8,082.74		
For repair shops	1,067.66		
For road rollers	3,619.03		
For water supply	35,282.92		
	61,642.97		

Expenditures, fiscal year 1906, for public works, city of Manila.

Item.	Amount.	Item.	Amount.
Purchase of benches for parks	₱2,967.31	Widening and straightening streets generally	₱135,938.93
Construction, San Miguel Bridge	18,556.04	Installation new water mains	347.20
Ayala Bridge construction and incidental expenditures	193,259.46	Repair and reconstruction, Pasig River walls:	
Bridge over Binondo Estero	39,580.00	Construction	₱205,920.44
Construction of cement curbs	8,681.04	Incidentals	462.88
Repairs to drains due to filling moat	3,999.98	Inspection	6,010.00
Foundation and erection, Binondo Lift Bridge	13,593.11		312,393.32
Purchase of land, lot 1, block 47, Ermita	45,009.37	Total	782,610.58
Purchase of grounds and construction of markets, Sampaloc and Paco	11,630.56	Construction of river wall, Pasig River, under supervision of city engineer, paid from Insular funds (Act No. 669):	
Filling moat, material dredged from harbor	70,132.38	Salaries and wages, inspection	6,065.60
Construction and widening Calle Nueva	18,081.65	Contingent expenses:	
Purchase of rights and traffic facilities, Vitas Canal	4,000.00	Contract	₱236,970.29
Purchase of seats and hand screws for pails	1,550.67	Cement	23,549.29
Preliminary survey, new water and sewer system	925.52	Miscellaneous materials	1,058.08
General widening of streets and filling moat:			261,577.60
Widening streets	₱1,011.78	Total	267,643.20
Filling moat	952.26		
	1,964.04		

POLICE DEPARTMENT.

Act No. 286 of the Philippine Commission, dated October 31, 1901, authorized 834 men as the strength of the police department. This limit was not changed until the month of June, 1906, but various reductions had been accomplished in accordance with the annual appropriations. A short time before civil government was established in 1901 the police department, under the direction of the provost-marshal, had enrolled about 2,000 men, Americans and Filipinos, on duty within the limits of the city of Manila. Between 1901 and 1904 the force was gradually reduced until the average for the fiscal year 1905 was 715 men. In the fiscal year 1906 the force averaged 700 men. On the 1st of June of the same year this number had been reduced to 679, and then, under the stress of urgent economy, a further cut was made to 646 men. On June 9 the Commission directed that the force be reduced to not more than 500 men, of which the Americans shall not exceed 200, including sergeants, and it was further ordered that the police department be maintained on a basis of ₱837,500 per annum. On May 29, after a careful consideration of the reduced income of the city, principally due to the transference of approximately ₱900,000 per year to the Insular Treasury by virtue of the operation of the new internal-revenue law, which sum had previously been collected in the city of Manila and credited to the municipal treasury, the Board resolved that the police department should be reduced so that the annual cost of maintenance should not exceed ₱900,000.

When the Commission considered the deficiency appropriation for the various departments, presented by the Municipal Board in the month of

May, no provision was made for covering the deficiency asked by the police department beyond what might be gathered by the transference of certain small unexpended balances from the last general appropriation bill. The actual situation and the immediate and severe effect on the police department of such failure to appropriate for the deficiency was clearly outlined to the Commission, but, no relief being obtained, the Municipal Board had no choice other than to summarily reduce the strength of the department. Accordingly, the first cut was made by dropping thirty-three first-class policemen on June 3. The Board, endeavoring to protect the city's interests, requested the Governor-General to take up with the Commission a proposition to declare the fiscal year 1906 as of eleven months' duration for the benefit of the police department and to permit the appropriation for the fiscal year 1907 to cover thirteen months, namely, from June 1, 1906, to June 30, 1907. This plan would have permitted a gradual reduction in the department, which would have avoided hardship to those men who were to be dropped from the rolls, and by careful adjustment the police work would not have been prejudiced; and, it is believed, that at the end of the period the department would have been operating satisfactorily within the prescribed appropriation. As this plan was not adopted, it was requested that the Commission carefully consider the actual condition of the police department, with a view to reconsidering its denial of the deficiency appropriation, which denial, in a large measure, was an abrupt departure from the practice long established of granting deficiency appropriations in the last half of each fiscal year for the various municipal departments, as well as the Bureaus of the Insular Government. It was suggested that this investigation be made through the Reorganization Committee.

Such an investigation was made, and, as a result, the maximum force was set at 500, exclusive of the secret-service bureau; moreover, the policemen who had been dropped from the rolls on June 3 on three days' notice, which reduction could not be avoided under the decision of the Commission to not grant any deficiency for this department, obtained relief by being returned to duty as of date of removal and continuing on duty on regular pay until June 15. This measure gave the men affected a few days more time in which to seek other positions.

The Municipal Board has repeatedly requested that the city be reimbursed for the cost of service of policemen detailed on purely Insular work, such as the guarding of the Printing Plant, the Treasury, the Auditor's Office and Ayuntamiento, the residences of certain members of the Philippine Commission, the dormitory of the Normal School, etc., amounting in all to approximately ₱54,840 for the fiscal year 1906, with corresponding sums for the previous fiscal years. These requests were based on the verbal agreement made by the then Civil Governor, at the time it became necessary to largely increase the guards on the Treasury and other Insular buildings in 1902. The plan then adopted was that the Board should

detail the guards to the Insular Bureaus, etc., upon the the request of proper authority and that reimbursement should be made from the appropriations of the Bureaus and from such other sources as required the additional protection; but the city has not been reimbursed, and when the Reorganization Committee convened with the Board the idea was introduced to consider the heavy expense thus imposed on the municipality as included in a part of the work expected to be enjoyed at the expense of the municipality in return for the 30 per cent of the expenses of the city of Manila annually appropriated from Insular funds. This theory is something of a surprise to the Board for the reason that when in the Charter of Manila it was stipulated that 30 per cent of the municipal expenses shall be paid from the Insular Treasury and that as part consideration of the *contribution* of this 30 per cent it shall be lawful for the Insular Government to appropriate to its use temporarily the building known as the Ayuntamiento, it was not presumed that the city would be expected to render dollar for dollar in service. As a matter of fact, each year the city has been performing increased service for the Insular Government, usually without recompense, on the basis that this additional expenditure of municipal revenues was merely returning to the Insular Government a part of the 30 per cent of the expenses which it contributed. If this same reasoning be carried out the city may ultimately perform work which will approach the value of the 30 per cent in question, and, therefore, this apparent assistance may ultimately disappear. At the present time there is no direct contribution to the city of the full 30 per cent of its annual expenses, because this percentage is largely reduced in the expenditure of municipal appropriations for the direct benefit of those departments of the Insular Government established within the city. At the end of the fiscal year 1906 the police department alone performed work of this character at an expense of approximately ₱54,840, which is indicated in the following statement:

Treasury Building, 6 American patrolmen.....	₱13,680
Civil Hospital, 3 American patrolmen.....	6,840
Ayuntamiento, 3 American patrolmen.....	6,840
San Lazaro Hospital, 9 native patrolmen.....	6,480
Governor-General's Palace, 4 American patrolmen.....	9,120
Commissioner Worcester, 3 American patrolmen.....	6,840
Commissioner Legarda, 2 native patrolmen.....	1,440
Commissioner Tavera, 2 native patrolmen.....	1,440
Ladies' dormitory, 3 native patrolmen.....	2,160
Total	54,840

The total amount expended by the city in payment of salaries of policemen detailed on special duty at the direction of the Insular Government since the establishment of civil government in Manila, exclusive of sanitary details, to June 30, 1906, is approximately ₱280,000.

At the same time that the force was reduced to 500 men the Commission recognized the agreement referred to above and gave relief to the city by directing that not more than six American policemen be detailed for the Insular service, of whom three were to be stationed at the Malacañan and three at the Ayuntamiento, and further, in case the sanitary exigencies of the city are such as to demand a greater force than twenty men assigned to the direction of the Bureau of Health, that special authority be granted for such increase and that such excess shall be allowed in excess of the total number of 500 above mentioned. The Bureaus requiring special guards have secured sufficient money in their annual appropriations to hire their own men, and, as a rule, these places have been given to policemen who were recently discharged in order to accomplish the required reduction in the force.

Under Act No. 1421 provision was made for the following officers: One chief, 1 assistant chief, 1 inspector, 1 surgeon, 1 assistant surgeon, 7 captains, 3 lieutenants (Americans), and 3 lieutenants (Filipinos).

The following have not been requested for the following year on account of the reductions effected during the year by the chief of police and the recent reduction due to the reorganization of the force: One inspector, 1 surgeon, 1 assistant surgeon, 1 captain, 3 lieutenants (Americans), and 3 lieutenants (Filipinos).

Act No. 1421 provided for an office force as follows: One clerk, class 6; 1 clerk, class 7; 1 clerk, at ₱3,000 per annum; 3 clerks, class 8; 3 clerks, class 9; 2 clerks, Class A; 1 Chinese interpreter; 2 clerks, Class D, and 3 messengers, at ₱2,400 per annum.

The following have not been requested for the coming year: One clerk, class 8; 1 clerk, class 9, and 2 clerks, Class D.

Act No. 1421 provided for the secret-service bureau as follows: One chief of secret service; 1 detective, at ₱4,000 per annum; 1 detective, at ₱3,600 per annum; 1 detective, at ₱3,200 per annum; 1 detective, at ₱3,000 per annum; 1 detective, at ₱2,800 per annum; 5 detectives, at ₱2,400 per annum; 2 detectives, at ₱2,000 per annum; 1 detective, at ₱1,800 per annum; 3 detectives, at ₱1,200 per annum; 3 detectives, at ₱960 per annum; 6 detectives, at ₱480 per annum.

There has been no change made in the personnel of the secret-service bureau for the coming year, with the exception of the promotion submitted for Mr. John W. Green, who has, on several occasions, been in charge of the bureau during the absence of its chief.

Act No. 1421 provided for first-class police as follows: Twenty-three sergeants, at ₱2,600 per annum; 23 roundsmen, at ₱2,400 per annum, and 324 patrolmen, not to exceed ₱660,000.

The following have been requested for the coming year: Thirty-two first-class sergeants, and 168 first-class patrolmen.

Act No. 1421 provided for second and third class police as follows: Second-class—Eighteen sergeants, at \$1,200 per annum; 18 roundsmen, at \$960 per annum, and 100 patrolmen, not to exceed \$80,000. Third-class—Ten sergeants, at \$720 per annum; 10 roundsmen, at \$600 per annum, and 284 patrolmen, not to exceed \$178,000.

The following have been requested for the coming year: Sixteen second and third class sergeants, and 284 second and third class patrolmen.

Act No. 1421 provided for a launch crew of 19 employees and an aggregate salary list of \$6,880. This does not appear on the estimate for the coming year, as the entire crew has been discharged and the launch laid up. The rowboats have been turned into the city shops.

The material reductions indicated in the above statements throw considerable additional work on every member of the force. The short experience already gained does not warrant definite criticism on the effect of the general efficiency of the department, or the proper guarding of the property and lives of the citizens of this city under the reorganization scheme.

In the future, adequate provision will be made for reimbursement to the police department for all special work done for other departments of the municipality; for instance, during the past year from time to time as many as 12 or 15 policemen have been employed in guarding prisoners working on the improvement of the cemetery and the removal of certain stone work and on other public works of the city, the salaries of which men were charged to the police department, although the services rendered were enjoyed by the department of engineering. The change is merely in line with the established custom of interdepartmental charges; thus, all repair work for the police department and labor and materials supplied by the city shops is a charge against it and a credit to the department of engineering. For several months a policeman was detailed in the department of engineering as a plumbing inspector while the regular inspector was absent on accrued leave, but the former's salary was paid by the police department. Similarly, two policemen were detailed in the electrical branch of the fire department because the department had no available appropriation for the hire of men, and these two salaries were paid by the police department without interruption. Other cases can be cited, and undoubtedly these services have been of great value and substantial accommodation. It has been most convenient to call on the police department for a detail of men for work in various other city departments, but it is only reasonable and fair that corresponding reimbursement should be made.

The Municipal Board and the officers of the police department have done everything in their power to assist the policemen who were dropped by reason of economy, to secure positions, and, in the majority of cases,

those men who have good records as policemen have been established in other branches of the service and in business houses.

The cost of the maintenance of the department during the year was as follows: Salaries and wages, ₱1,097,536.57; contingent expenses, ₱58,381.32.

Of these expenditures a refund has been made from the sales of uniform material in the amount of ₱11,019.

During the year fifty-four appointments were made, of which 12 were Americans and 42 Filipinos; 993 applications were made for accrued leave, 370 by Americans and 623 by Filipinos; 2,357 applications were made for vacation leave, of which 1,243 were made by Americans and 1,114 by Filipinos; on detached service, Americans 3; discharges, 249, of which 116 were Americans and 133 Filipinos; there were 14 transfers made from this bureau, 9 Americans and 5 Filipinos; 6 promotions were made, 2 Americans and 4 Filipinos; transfers to the department, 1 American; reinstatement, 1 American, 2 Filipinos; reductions 43, Americans 23, Filipinos 20.

The patrol wagons of the department responded during the year to 1,648 calls; 1,421 were ordinary calls and 227 "fast" calls. Nine hundred and eighty firearm permits were issued; 241 renewed, and 336 canceled.

Pound.—The city poundkeeper impounded during the year 2,276 dogs, of which disposition was made as follows: One thousand five hundred and seventy-four were cremated, 451 redeemed, 216 released, 5 turned over to Bureau of Government Laboratories, 8 escaped, and 19 on hand. He also impounded 20 horses, 102 ponies, 7 mules, 137 hogs, 116 goats, 4 sheep, 41 carabaos, 6 cows, and 4 deer, and collected fees to the amount of ₱4,055.15.

Health.—The health of the department during the past year has been excellent. Eight deaths occurred, six of which were the result of natural causes, one by suicide, and one killed by live electric wire.

Police fund.—This fund has decreased owing to the number of deaths and the disinterring of the bodies of eight American policeman in the National Cemetery and reinterring in the Cementerio del Norte and the removal of the body of one native policeman from paupers' lot to Cementerio del Norte, music at funerals of deceased members, and a present of ₱100 to the destitute widow of Mamerto Picardal. The receipts for the year amounted to ₱2,102.74, while the expenditures amounted to ₱3,180; total remaining on hand June 30, 1906, ₱5,478.16; of this amount ₱5,440 is on deposit in the Chartered Bank of India, Australia, and China, and ₱38.16 is under the care of the storekeeper of the department.

Confiscated, found, and stolen property.—Three hundred and six entries of the above have been received during the year, making a total of 1,727

entries in a little over five years; 102 were disposed of at auction November 21, 1905, for the sum of ₱97.62, and 72 entries on May 24, 1906, for ₱123.17.

Prisoners arrested.—During the year 11,992 arrests were made, which is a decrease of 1,671 from the previous year. The chief causes of arrests were:

Gambling	2,695
Embezzlement	1,446
Disorderly conduct	1,170
Theft	608
Blocking highway	469
Vagrancy	409
Assault	358
Larceny	279

It is to be noted that there was very little violent crime. There were but 2 cases of attempted murder, 7 of murder, 8 of assault with a deadly weapon, 3 of assault with intent to kill, 1 of attempted suicide, 6 of frustrated murder, 11 of rape, 1 of frustrated homicide, and 3 of homicide. The principal offenders were: Filipinos, 9,223; Chinese, 1,739; Americans, 725; Japanese, 112; Europeans, 87; Spaniards, 64.

Summary court.—There were 281 cases tried during the year by the assistant chief of police, who acts as summary court officer. Many of these men were discharged, others fined and censured.

Typhoons and care of destitute persons.—On the 26th of September, 1905, a severe typhoon passed over the city, causing many people to be homeless, and the police department rendered all assistance possible. Men on leave and sick performed almost continuous duty in the saving of lives and property and bringing to the different stations those who were in need of food and shelter. Twenty-three sacks of rice and thirty-one cases of salmon were obtained from the civil supply store of the Bureau of Constabulary and distributed to the destitute. During the raging of this typhoon Patrolman Alfonso Sobrevilla was killed by fallen live telephone wire while in the act of endeavoring to rescue a small boy who had come in contact with the same wire. Salary due him, together with his accrued leave and subscription amounting to about ₱800, was turned over to a committee appointed by the Department for the purpose of taking care of his wife and children.

Reappearance of cholera.—During the month of August, 1905, cholera made its reappearance in the city, the first case being in the district of Sampaloc. Owing to this epidemic the police have a great deal more work to perform, being used as guards at all houses where the disease is discovered. They also assist in preventing the sale of prohibited foods, etc.

Processions.—Religious processions in the city of Manila occupy a great deal of the time of this department. As a rule these processions require the time of from twelve to fifteen men for one or two hours to handle the crowd. The following indicates approximately the service so rendered:

Total number of police used.....	3,710
Total hours of duty.....	13,702
Processions and festivals	207

So that it can be seen that with the number of processions in the city during the year the services of policemen necessary to handle the crowd and length of time employed are costly. Theaters, cinematographs, banquets, etc., also take up considerable time of the police department.

Coöperation with Constabulary.—Coöperation with the Philippines Constabulary and the military authorities continues to be excellent, as in the past. The only friction which has arisen between this department and the Philippines Constabulary has been over the right to arrest in Manila. This matter has been satisfactorily arranged and is now working nicely.

Consolidation and transfer of stations.—The river and harbor police of San Fernando Station were transferred to the building better known as the captain of the port's office. This station is now consolidated with Cuartel Meisic and no records of any kind are kept at this station. The police of Santa Cruz and Anloague have also been consolidated with those at Meisic. Through the consolidation of the police, the following stations have been vacated: Anloague, American and native; Santa Cruz, American and native; Sampaloc, native.

Longevity pay.—At the time the estimates for the appropriation were considered by the Municipal Board, under the stress of rigid economy which was then being enforced, the Board decided to suspend the operation of the longevity-pay system in the police and fire departments for the present fiscal year. Moreover, the report of the Organization Committee on the changes in the police department, which was approved by the Commission, provided a maximum sum for the operation of the department for the coming year, which did not admit of the increase in salary due to length of service as based on the accepted system of longevity pay.

The committee on police has recommended that the Board reconsider this action, the expediency of which is open to question in view of the small amount of money involved and the dissatisfaction which may be aroused among the members of the force, with more or less reason. The number of men affected by the increase of pay is smaller than appeared at the former consideration of the matter. A large majority have already

enjoyed the full operation of the longevity pay and are not now subject to further increases on account of continuous service, but must look to promotion in rank as a means to increased salary. The number of men in the police department to be affected by this suspension is as follows—

First class:

47 from ₱2,160 to ₱2,280.....	₱5,640
9 from ₱2,000 to ₱2,160.....	1,440
2 from ₱1,800 to ₱2,000.....	400
Total (58)	7,480

Second and third class:

43 from ₱660 to ₱720.....	₱2,580
24 from ₱600 to ₱660.....	1,440
10 from ₱480 to ₱600.....	1,200
Total (77)	5,220

Aggregate	12,700
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Which is the amount the police estimate would have to be increased in order to give all the men in the classes affected the extra pay allowed under the longevity system; but, inasmuch as this increase is to be allowed only to those whose services are entirely satisfactory, a small reduction may be made in view of those cases wherein the services have been such as would not warrant the increase.

Mounted detachment.—At the close of the fiscal year, on account of the enforced economy, this detachment was dismounted and horses, equipment, etc., were turned over to the superintendent of sanitation and transportation. Arrangements have been made whereby, when necessity demands it, such as at processions and in reconnoitering the outlying districts in the event of disturbance, horses may be obtained. With this change it will not be possible to patrol the city limits in as efficient a manner as in the past, which region is occupied by a more or less lawless element usually found in the vicinity of cockpits, gambling houses, etc.

Uniforms.—On February 1, 1906, the first-class (American) policemen reverted to the original khaki uniform, experience having shown that nothing is so satisfactory in wear, cost, and general comfort. The second and third-class (native) policemen made a similar change on April 1, 1906, and the new uniforms have not only proven more satisfactory than the old canamo but have very much improved the appearance of the wearers.

Police surgeons.—The work which was formerly performed by the two police surgeons is now being done by doctors of the Bureau of Health, and the former have resigned. The district stations of the

Bureau of Health have been established in the various police stations, and the district doctors attend to all cases of sickness not requiring hospital care. This results in economy to the police department in the saving of the salary of the two surgeons and to the Bureau of Health in the saving of rental of district offices and storerooms.

Bribery.—Capt. Jack Dawson, formerly commanding officer of Precinct No. 3, was charged with accepting of bribes to permit gambling in his precinct and to give police protection to the players. After a careful examination by the chief of police and his assistants, the evidence was transmitted to the Municipal Board and that body made a searching investigation which resulted in the final dismissal of the accused captain. He was tried on other charges in the Court of First Instance and acquitted. This is the first serious case of this nature which has occurred since the organization of the police department.

Secret service.—The secret-service bureau recovered stolen property to the value of ₱29,055.84 and stolen money to the amount of ₱4,153.37. The Bertillon system of criminal identification, installed last year, is now in full operation, and as the employees are more familiar with the details the service is becoming much more valuable. The bureau has conducted a large number of investigations for the Insular Government, in addition to the municipal work, and during the last few weeks of the fiscal year several of its members were steadily engaged in obtaining information for the Board of Pardons, recently appointed by the Governor-General to make recommendations for the release of certain men who were serving terms in Bilibid Prison.

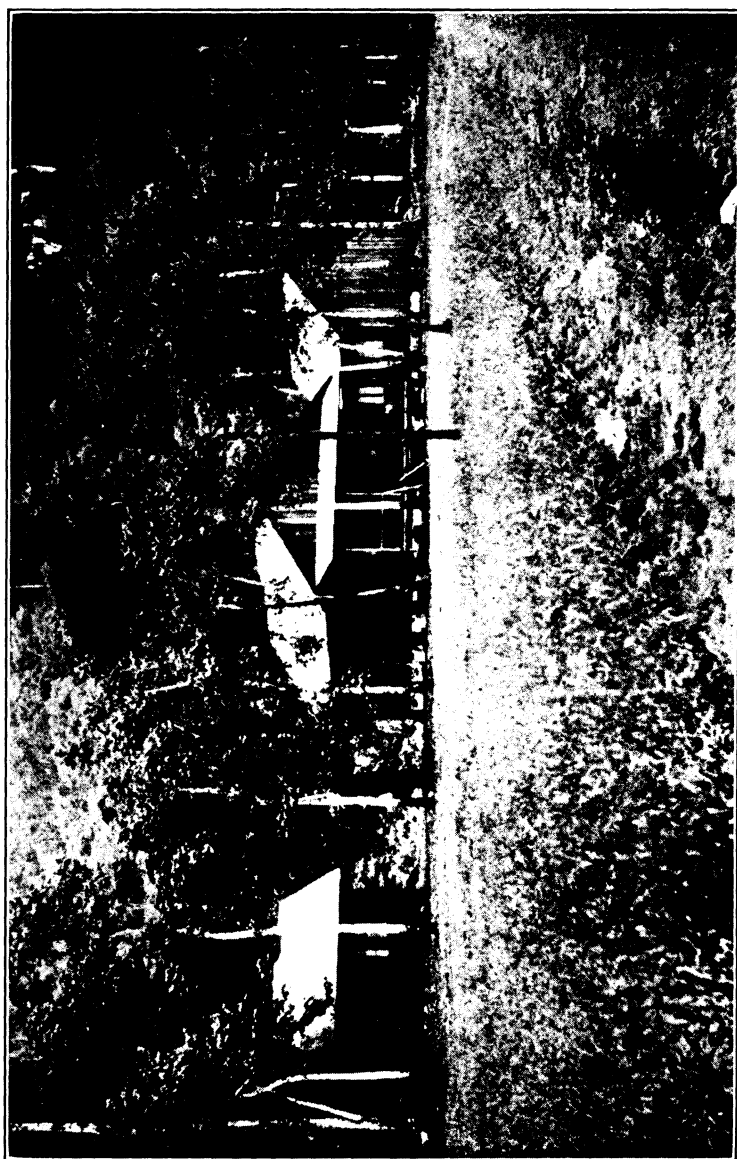
Experience has shown that it would be greatly to the advantage of the police department to require all persons operating bancas in Manila Bay and the Pasig River to be registered at the police station nearest the water front. Owing to the numerous crimes committed on the river and water front such registration would facilitate investigations.

LAW DEPARTMENT.

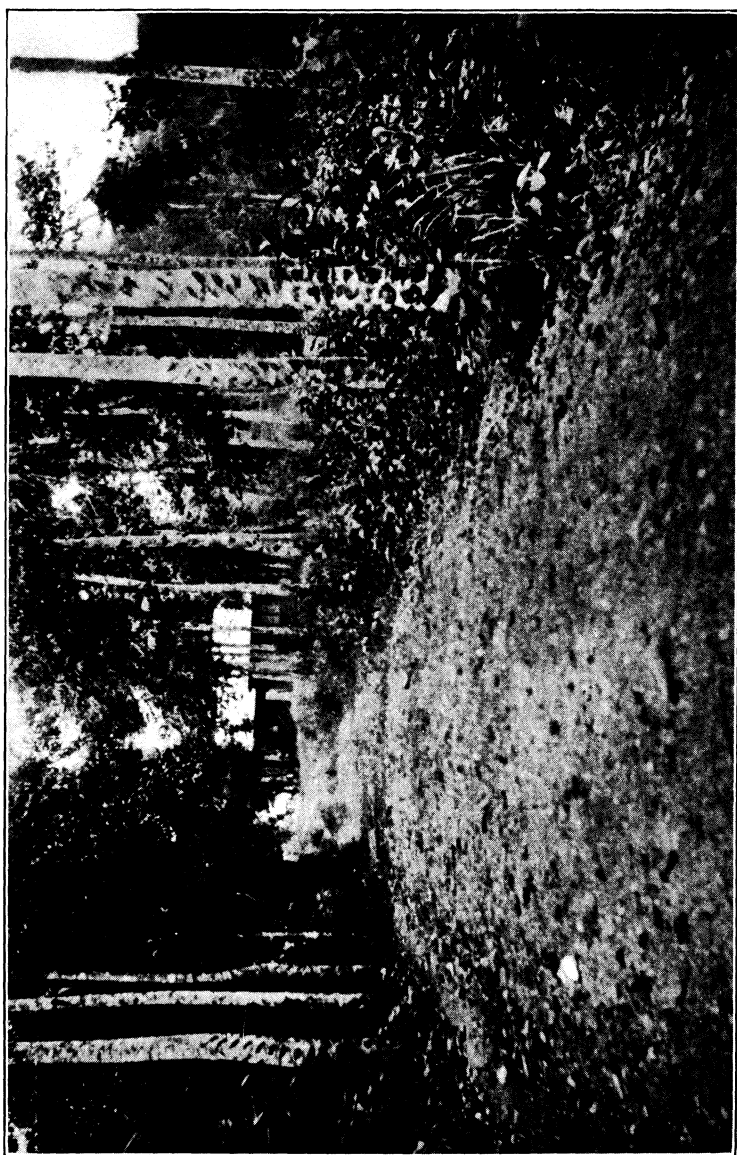
OFFICE OF THE CITY ATTORNEY.

The maintenance of the force of this office costs ₱15,220 annually. It is composed of 10 employees, of which 3 are Americans and 7 Filipinos, to wit: One city attorney (Filipino), 1 assistant city attorney (American), 2 clerks class 6 (Filipino), 1 clerk class 7 (American), 2 clerks class 8 (1 Filipino and 1 American), 2 clerks class 9 (Filipino), and 1 messenger (Filipino).

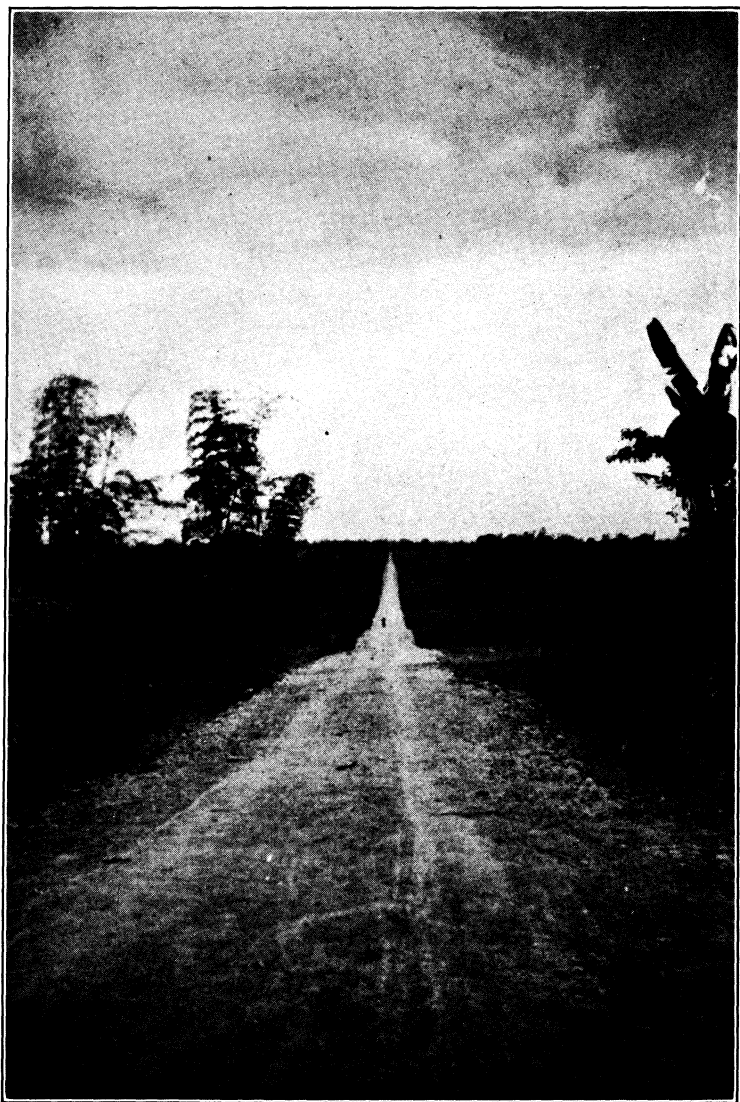
The following statements comprise the résumé of the administrative and judicial labors for the fiscal years 1904-5 and 1905-6.



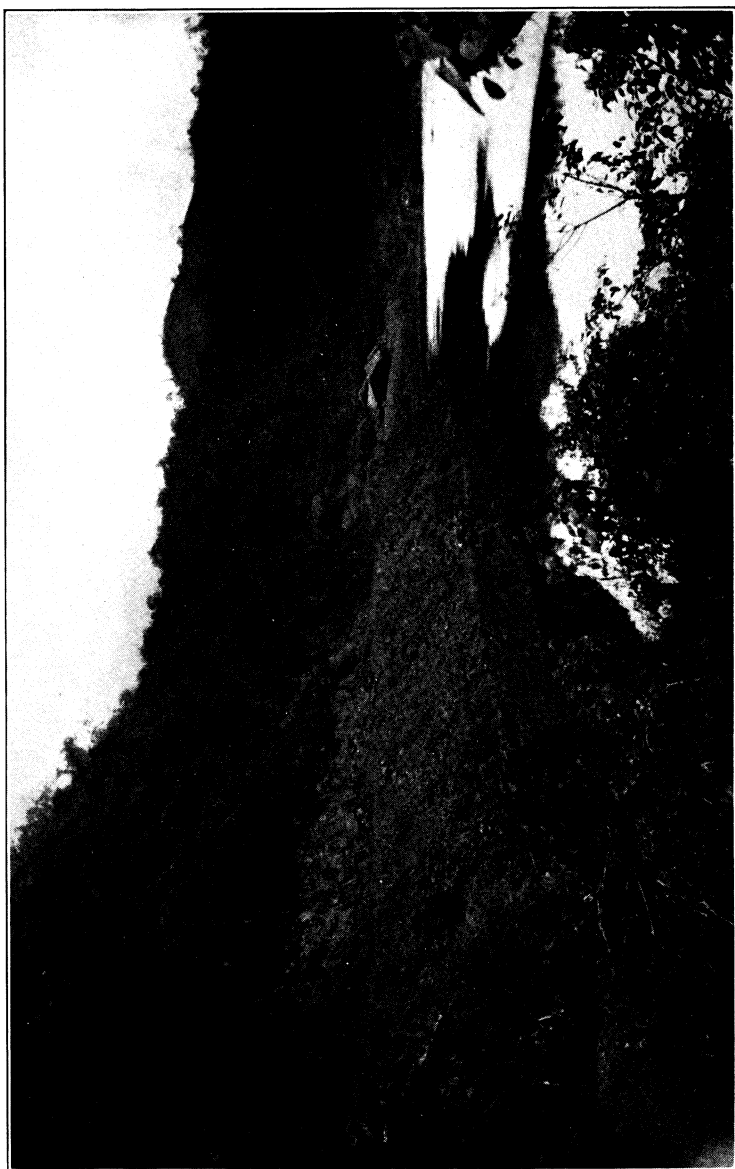
ENGINEERS' CAMP, HEADQUARTERS NEW WATER SYSTEM.



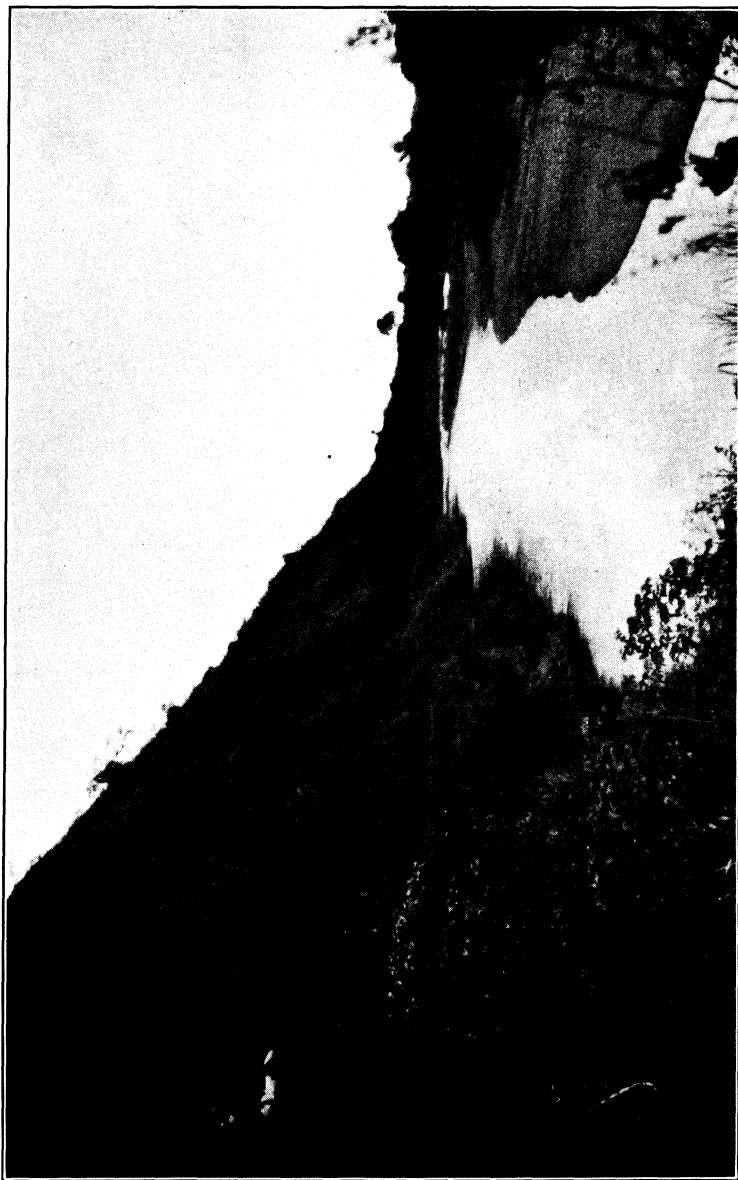
YLANG YLANG GROVE AND ENGINEERS' CAMP, HEADQUARTERS NEW WATER SYSTEM.



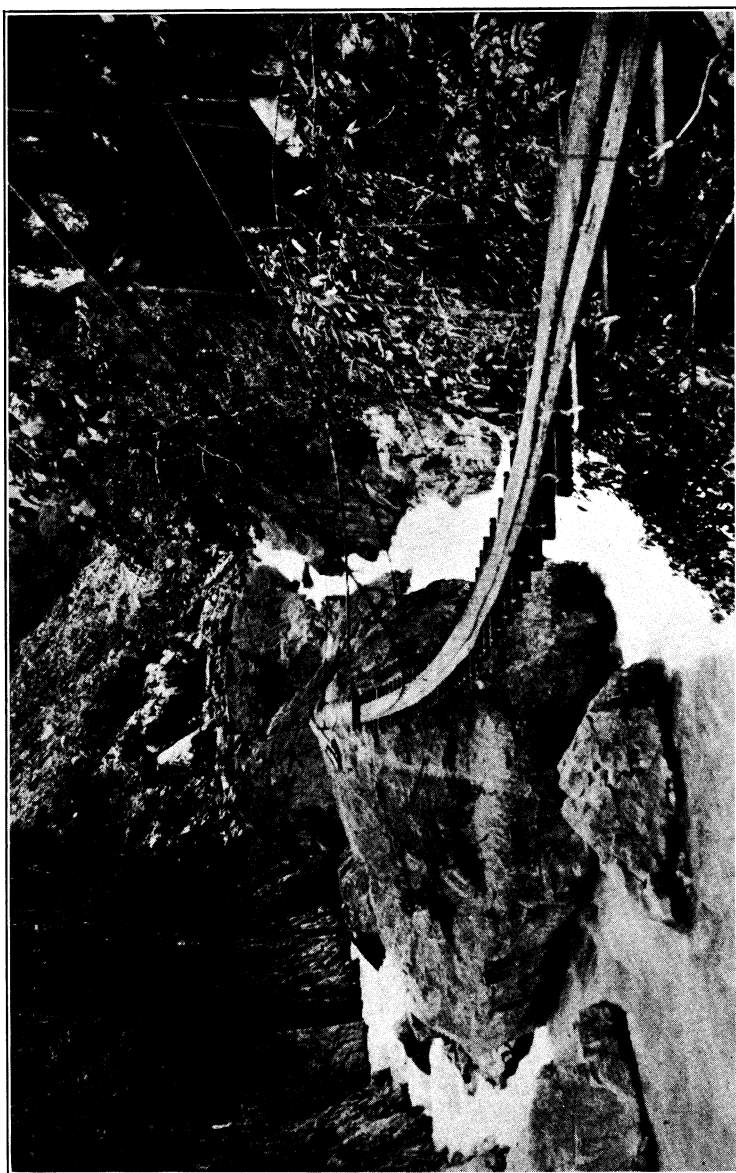
ROAD OVER PIPE-LINE RIGHT OF WAY, NEW WATER SYSTEM, LOOKING TOWARD
MANILA FROM MARIQUINA HEIGHTS.



ROAD CONSTRUCTION, NEW WATER SYSTEM, SHOWING HEAVY ROCKWORK.



ROAD LEADING TO DAM SITE, NEW WATER SYSTEM, LOOKING DOWN STREAM.



GORGE BELOW DAM SITE, HEADQUARTERS NEW WATER SYSTEM.

Administrative labors during the fiscal years 1904-5 and 1905-6.

Nature of work performed.	1904-5.	1905-6.
Opinions written	96	73
Ordinances prepared	12	6
Bonds, deeds, etc., prepared	164	146
Letters sent	1,481	757
Letters received	928	465

Cases prosecuted.

FISCAL YEAR 1904-5.

Court.	Finished.				Pend- ing.	Total of cases.
	Won.	Lost.	New trial or dis- missed.	Total.		
Supreme Court	1	1		2	15	17
Court of First Instance	16	2	1	19	42	61
Court of Land Registration	33	1	1	35	14	49
Court of justice of the peace			1	1		1
Total	50	4	3	57	71	128

FISCAL YEAR 1905-6.

Supreme Court	5	4	1	10	30	40
Court of First Instance	22	2	3	27	32	55
Court of Land Registration	42	5		47	8	45
Court of justice of the peace	40		2	42	2	49
Total	109	11	6	126	72	198

From the comparative study of the work done in the year ending June 30, 1906, with that of the previous period, it is drawn that while the labors of an administrative character have decreased in the former, those of a judicial nature have increased, and it can be asserted as a fact that the volume of work accomplished by this office in the two years is almost the same.

It is worthy of note that while one of the principal functions of the city attorney, as per section 38 of the Manila Charter, is to make investigations regarding any city official accused of negligence or bad conduct in the performance of his office as likewise regarding any person alleged to have violated any franchise or privilege granted by the city, there is no record in the résumé of labor done by this office of any matter of that nature, notwithstanding that investigations of complaints of this kind have been held.

It would, therefore, be advisable in the future that all these investigations be held by the city attorney, excepting those of acts subject to discipline committed by members of the police and fire departments, because for those the chiefs, respectively, are empowered by sections 35 and 45 of the Manila Charter.

OFFICE OF THE PROSECUTING ATTORNEY.

The appropriation for this office for salaries is ₱44,860. Its personnel consists of 14 employees, 7 of which are Americans and 7 Filipinos, as follows: One prosecuting attorney (American); 5 assistants, of whom 2 are Americans and 3 Filipinos; 7 clerks, of whom 4 are Americans and 3 Filipinos; 1 messenger.

The excessive labors weighing upon this office in previous years has diminished, as may be seen by the following table:

	1904-5.	1905-6.
Investigations made	4,080	4,619
Cases in Court of First Instance	611	480
Cases in municipal court	862	3,122
Total of cases filed	1,473	3,602

During last year fewer cases have been filed in the Court of First Instance as compared with the previous one, due principally to the disappearance of the brigandage cases that were so troublesome in former years.

The considerable increase of cases filed last year in the municipal court, as compared with those filed during the previous one, is accounted for because since January last an assistant from this office acts in all and each one of the cases filed in that court, while prior to said date the prosecuting attorney intervened solely in such cases as his office prepared for prosecution.

This office was in charge of the Hon. C. H. Smith until March 25 of this year, when he resigned owing to his appointment as a judge of First Instance. Mr. Aylett R. Cotton, an attorney at law practicing in the city of Iloilo, was appointed to substitute Judge Smith under date of April 1 last.

OFFICE OF THE MUNICIPAL COURT.

The personnel of this office costs ₱16,520 per annum, consisting of 7 employees, of which 2 are Americans and 5 Filipinos, to wit: One judge (American), 1 clerk (American), 3 assistant clerks (Filipino), 1 interpreter (Filipino), and 1 messenger (Filipino).

There are, moreover, 3 American and 1 Filipino police officers permanently detailed for service in the court.

The business during the past year has been less than in the previous term, as may be noticed by the statement below:

Cases during the years 1904-5 and 1905-6.

Disposition.	1904-5.	1905-6.	Decrease.
Complaints filed	8,328	7,130	1,198
Defendants tried	12,808	11,122	1,686
Males tried	10,854	9,415	1,439
Females tried	1,954	1,707	247

OFFICE OF THE REGISTRAR OF DEEDS.

This office is served entirely by 8 Filipino employees, implying an expense of ₱9,720, and classified as follows: One registrar, 1 deputy registrar, 5 clerks, and 1 messenger.

These employees do considerable clerical work. Besides attending to the registry books corresponding to the city of Manila, they also keep the registry books belonging to the towns of Pateros, Taguik, Pineda, Parañaque, Las Piñas, Muntinlupa, San Pedro Macati, San Felipe Neri, San Juan del Monte, Pasig, Kainta, Taytay, Mariquina, Antipolo, Angono, Binagonan, Cardona, Morong, Barras, Tanay, Jalajala, Pililla, Teresa, Caloocan, Tambobo, Navotas, Novaliches, San Mateo, Montalban, and Bosoboso, of the Province of Rizal. Up to the present time no definite arrangement has been made to terminate this inconsistency; and although no new registrations are entered in the registry books of the aforementioned towns, nevertheless all actions subject to registration relating to property already registered and all certificates of registration of said property are being attended to by this office.

If to the foregoing be added that the mortgage law requires that all these registrations must be written by hand in said registries, the strenuous work of this office to keep registrations to date can be easily understood.

Again, during the year ending June 30 last there has been an increase in the number of registrations of titles and also a greater number of mortgages and reversion sales as shown by the following statement:

Nature of work.	July 1, 1904, to June 30, 1905.			July 1, 1905, to June 30, 1906.		
	Mort- gage Law.	Act No. 496.	Total.	Mort- gage Law.	Act No. 496.	Total.
Mortgages	117	57	174	118	64	182
Cancellations	110	26	136	84	35	119
Reversion sales	193	33	226	200	46	246
Redemption sales	91	8	99	83	7	90
Registration of titles		235	235		255	255

The increase in sales and in liens upon city real estate and the decrease in redemptions are very eloquent data to appreciate the general economic conditions.

For the purpose of remedying certain complaints regarding delay in the dispatch of matters in this office, it was decided in March last to add one more clerk of Class I and to provide it with suitable cabinets wherein to guard all the registration books and other documents which had theretofore been kept in the vault of the department of engineering, which vault, being situated two floors below this office, was a cause of difficulties and loss of time in its labors.

It would be advisable to enact the necessary laws limiting this office to keep the registry books of property comprised within the municipal radius of Manila, since by the act (No. 1508) establishing the chattel mortgage the labors of this office will be considerably increased as soon as it is put in force.

COURT OF JUSTICES OF THE PEACE.

There are two courts of justices of the peace in the city, wherein all the employees, three in each court, are Filipinos. The salaries of each court amount to ₱2,832 per annum.

One of these courts has always been located within the Walled City and the other on Anloague Street until January 20 last, when it was moved to the Walled City also, and both are now located in the Supreme Court building.

The belief in the need of two justice of the peace courts in two different districts of the city is unwarranted, since no disturbance has been noticed by their concentration in the Walled City.

The business done by these two courts in the last two years is stated in the following table:

Nature of work performed.	1904-5.	1905-6.
Suits tried	1,903	1,815
Affidavits taken	117	41
Articles of assignment drawn	32	13
Marriage certificates recorded	2,302	1,536

-From the examination of the foregoing table it is inferred that the labors of the courts of justices of the peace have diminished considerably within the last year, so that the two courts could be consolidated into one, with one justice, one clerk, and a messenger, to whom greater salaries could be assigned than those now drawn by them.

OFFICE OF THE SHERIFF OF MANILA.

The force of this office costs ₱19,150 per annum, and is composed of 3 American and 12 Filipino employees, plus 6 laborers permanently in service, as follows: One sheriff (American), 2 deputy sheriffs (American), 7 deputy sheriffs (Filipino), 2 prisoners' guards (Filipino), 1 driver (Filipino), 2 clerks (Filipino), 1 janitor (Filipino), and 6 Filipino laborers.

In the warrants for arrest this office has been aided by the secret-service officers.

Its labors have notably decreased in criminal cases and have increased in civil cases, as may be seen below:

Labors accomplished during the years 1904-5 and 1905-6.

Nature of work.	1904-5.	1905-6.	Increase.	Decrease.
Attachments	167	203	36	
Attachments discharged	40	36		4
Appointments made general and special	39	35		4
Bench warrants		31		
Citations (subpoenas):				
Civil	1,075	951		124
Criminal	4,050	2,301		1,749
Certificates of sale	50	72	22	
Claims filed (third party)	45	65	20	
Indorsements made		36		
Executions	475	660	184	
Garnishments served	138	246	108	
Indemnity bonds taken	19	40	21	
Injunctions	62	24		38
Letters written	401	325		76
Levies discharged by order	7	4		3
Notices to register of deeds	70	104	34	
Notifications	125	171	46	
Orders to declare		34		
Orders of ouster	187	325	138	
Orders of arrest:				
Civil cases	28	19		9
Criminal cases	504	314		190
Orders to deliver	27	24		3
Orders to show cause	56	42		14
Orders of sale	6	8	2	
Posting notices, Court of Land Registration	282	278		4
Prisoners:				
Transferred	1,219	696		523
Committed	381	245		136
Incarcerated	456	257		199
Released	236	122		114
Bailed	178	119		59
Reports made	57	43		14
Requisitions passed	132	105		27
Sales advertised	166	217	51	
Sales made	95	135	40	
Stay of execution	6	16	12	
Summonses in civil cases	2,771	3,096	325	
Vouchers prepared	142	237	95	
Writs:				
Of habeas corpus	35	24		11
Of replevin	27	45	18	
Of replevin discharged		3		

The increase in civil matters has also augmented the fees collected by this office. The following fees were collected during the years 1904-5 and 1905-6: 1904-5, ₱12,777.03; 1905-6, ₱14,867.23.

FIRE DEPARTMENT.

The personnel of the fire department for the fiscal year 1906, including officers, consisted of 146 men. Of this number 83 were first-class firemen, 2 of which were Filipinos, and 61 were second-class (Filipinos). Of the total of 146, 8 men were occupied in the work of the electrical branch. The department is divided into seven engine companies, four chemical companies, two hook-and-ladder companies, and it is housed in seven stations, all of which belong to the city, except No. 4, Intramuros station, which property is claimed by the Insular Government.

CHANGES AND RECOMMENDATIONS.

In the last appropriation bill provision was made for 12 foremen, 7 engineers of the first-class (Americans), and 7 engineers of the second-class (Filipinos). During the year the number of foremen was reduced

from 12 to 9 by taking advantage of resignations and separations occurring in this rank. It is proposed to further reduce this number to 8 foremen, and provision has been made for such change in the estimate approved by the Board and now before the Commission awaiting consideration. It is also proposed to reduce the 7 engineers of the first class to 5 and to increase the number of second-class engineers to 9. It is the aim of the department to promote Filipinos to responsible positions as soon as they show themselves capable of performing the higher duties. The promotion of two Filipinos to the engines will be in the nature of an experiment, which will be carefully observed because of the importance of the work to be performed by these men. Filipino engineers have been employed in the department as second-class engineers on apparatus of lesser importance for some time. Under the close observation and careful instruction of the chief engineer it is believed that the experiment about to be inaugurated will be successful.

Up to June 30, 1906, the electrical branch consisted of 1 city electrician and deputy chief, 1 assistant electrician, and 6 linemen, 2 Americans and 4 Filipinos. The reorganization as contemplated in the estimate approved by the Board provides for the elimination of the position of assistant electrician and relieves the city electrician of the duties of deputy chief. This reduction is believed to be feasible, owing to the practical completion of the police and fire alarm system. During the past three years this work has been very heavy, but from now on the extensions required from time to time can be made by the reduced force.

On January 30, 1904, the Municipal Board adopted a resolution placing the direct supervision of the lighting of public buildings and places under the city electrician, but requiring all vouchers and accounts pertaining to the same to be signed, as heretofore, by the city engineer, after being approved by the city electrician, and it further provided that the work of the inspection of buildings shall be transferred from the building inspector to the superintendent of buildings and illumination. This practically amounted to an amendment to section 33 of the City Charter, but that amendment has not been enacted. Therefore, the change in the administration of the fire department which was temporarily effected pending the enactment of the amendment has not been strictly legal. It was urged by the then committee on fire that the change provided in the resolution would produce economy and, at the same time, improve efficiency, but experience has shown very definitely that the consolidation is not a success. The last estimate of appropriation provides for the limitation of the duties of the city electrician to purely electrical work. The construction and operation of some 40 miles of electric street railway and the gradual installation of an entirely new system of electric street lighting, together with the installation of a new telephone system and the removal from the streets and public places of

the old telephone and electric systems, have so added to the labors and the importance of the electrical department that it becomes absolutely necessary for the city electrician to devote his entire time to his particular work.

An alternative estimate has been submitted to the Municipal Board, wherein it is provided that the city electrician shall have entire charge of all matters pertaining to the use of electricity in the city. At the present time the responsibility for supervision, checking, and payment of the public lighting in the streets and plazas, and also in the public buildings, is divided between the city engineer and the city electrician, with the result that the efficiency of the department is lowered and there are numerous conflicts between the two officials. The city engineer is thus required to sign vouchers which he has no way of checking or of conclusively determining the accuracy, and he is obliged to rely on the reports of the superintendent of buildings and illumination and the city electrician. The last named is the only official who can properly handle such matters and the entire responsibility and authority should rest with him. The committee on fire has prepared a plan for the consolidation of the electric work of the Insular Government of Manila with the office of the city electrician, which has been discussed by the Municipal Board and referred to the Reorganization Committee for its consideration. The matter will be discussed at the time the estimates are being considered by the Commission, and should the plan be approved it is believed that economy and better administration will be effected.

Owing to the failure of the consolidation of the offices of the city electrician and deputy chief, it has been found necessary to detail one foreman to headquarters designating him temporarily as subdeputy chief, to perform the duties imposed by the rules and regulations. This officer is required to make the inspections of inflammables and explosive material, and also conducts the summary court. It is recommended that the position of deputy chief be restored at the old salary of ₱3,600 per year. By promoting a foreman to this position his salary will be increased ₱600 per annum, provided, however, that not more than ₱3,200 shall be appropriated for the fiscal year 1907.

Fire protection on the river and bay.—On January 28, 1906, arrangements were made with the Director of Navigation for the use by the fire department in case of fires in the shipping on the river and on the bay and along the water front of the launches *Bohol*, *Cuyo*, and *George Tilly*, which are equipped with fire pumps, and a gong was installed on Engineer Island. The capacity of the department was thus greatly increased. The *Bohol* and *Tilly* have the advantage of being able to pass under the bridges at almost any stage of the tide.

Previous to this time the only protection of this class consisted of the fire pumps on the police launch *Buckey O'Neill* and the sanitary barge

Pluto. On May, 24, 1906, the Director of Navigation rescinded this arrangement, which operated practically to put all the launches of his bureau at the immediate command of the fire department in case of a marine fire, by imposing the requirement that in each individual case the permission of the Director for the use of the launches of his bureau should be received before they could respond to an alarm. As one of the chief elements in fighting fire is the ability to reach the conflagration in the quickest possible time the main advantage in the use of the launches has therefore been lost. However, when the department needs the launches fitted with fire pumps, every effort will be made to communicate with the Director and obtain his permission. In the plan of the organization committee of the Insular Government concerning the police department of the city of Manila, which plan was approved by the Commission, no provision has been made for the retention in the service of the police launch *Buckey O'Neill*, and on June 30, 1906, the crew was discharged and the launch went out of commission. If it is restored to service in some Bureau of the Insular Government it will be outside the jurisdiction of the city and its value for fire-fighting purposes will be approximately the same as the launches of the Bureau of Navigation. This reduces the city's equipment for marine fire service to the pumps on the sanitary barge *Pluto*. As this barge makes daily trips to the dumping grounds at least 10 miles down the bay, it will not be available for several hours each day. With these statements there is obviously no need for a further explanation of the fact that the river and bay shipping and much of the water-front property are deprived of any adequate fire protection, and it is recommended that provision be made for more convenient use of and greater jurisdiction over the launches which are fitted with fire pumps. The services of the police launch, when fighting fires under the direction of the fire department, have been valuable.

Contracts have been awarded for the construction of wharfs and warehouses for the quartermaster department of the Army and for the Civil Government, and with the improvement of the reclaimed area and the attraction of offices and warehouses to the site of the new harbor south of the river the demand for marine fire protection will naturally be much increased. Shipping will be more centralized and the lighterage and storage of cargo will occupy a more restricted area. In addition to the increase in the equipment of the department designed to protect this important section against fires in the harbor, special attention should be paid to the extension of the system of hydrants which will be installed on the reclaimed area.

On the recommendation of the committee on fire and the chief of the department the present estimate of appropriation provides for a change in the title of the grades of foremen and assistant foremen to captain and

lieutenant. These titles were formerly employed in the department, and though the first titles have been officially used for the past year nevertheless the old titles are used by the public and by the majority of men in the department and there appears to be no good reason why they should not be again used; moreover, the men desire the restoration.

On January 30, 1906, the Commission passed an act granting permission to the Manila Electric Railway and Light Company to construct tracks and overhead work in the city of Manila, traversing certain streets in the Walled City, along the glacis, and looping the quartermaster storehouses, thus giving communication with the reclaimed area of the water front for the purpose of carrying freight and parcels. On the same date the Commission granted a franchise to Charles M. Swift to construct, maintain, and operate an electric railway and an electric light, heat, and power system from a point in the city of Manila in an easterly direction to the town of Pasig in the Province of Rizal. When this railway is constructed it will give quick communication between Manila, Fort McKinley, and Pasig and will add much to the accommodation of the people in these places, between which there is rapidly increasing traffic.

On July 6, 1905, the Commission granted a franchise to the Philippine Islands Telephone and Telegraph Company to construct, maintain, and operate telephone and telegraph systems and to carry on general electrical transmission business in and between the provinces, cities, and municipalities of Luzon. This franchise is not exclusive and preserves the right to the Government to regulate the rates to be charged by the grantees. It anticipated the purchase of the franchise of the Sociedad de Telefonos de Manila by providing that all the rights and privileges acquired by such franchise should be considered as merged in the new franchise and that the old franchise should have no force or effect whatever after the said purchase. After much negotiation the purchase was effected and preparations are now being made to remove the obsolete lines and fixtures of the Sociedad de Telefonos de Manila. In lieu of taxes on the franchise or earnings the Philippine Islands Telephone and Telegraph Company is required to pay to the Insular Treasurer each year 2 per cent of the gross receipts of the telephone and telegraph or other electrical transmission business transacted under the franchise. At the time the franchise was under discussion a representative of the Municipal Board introduced a provision to the effect that the 2 per cent of the gross earnings of the company in the city of Manila should be paid to the city assessor and collector, but this was not allowed by the Commission for the reason that it was not believed proper that it should be included in the language of the franchise which deals only with the Insular Government and the grantee; but it was understood that the Insular Treasurer would credit the city of Manila with its full 2 per cent of its gross

earnings within the limits of the city. The company is under the obligation of being fully equipped and ready to operate, within eighteen months from the date of the granting of the franchise, 1,000 telephones in the city of Manila, and a deposit of ₱50,000 or negotiable bonds or other approved securities was exacted, as a guaranty. These conditions have been practically fulfilled and the new system is now in a fair way to successful operation. The old system was closed for business on July 15, 1906, and the work of the removal of the poles, wires, etc., has commenced. A large part of the lines of the new system is carried in cables and laid in cement conduits. The work is being watched with great interest, for the reason that this is the first experiment of the extensive use of underground conduits in the city of Manila. The company has been somewhat embarrassed by the accumulation of surface water in the manholes and also in the joints of the conduits; but the limited experience apparently demonstrates the success of this method of construction. If extended operation develops entire satisfaction, it is the intention of the Board to require a conduit construction for electrical transmission wherever the same is feasible. Arrangements have been made for the joint use of the city poles carrying the wires of the fire and police alarm system. A fixed tariff has been adopted for the rental of space on the poles, and in this way the city derives a small revenue, which goes to the maintenance of the poles and equipment; and, at the same time, the streets over which the new telephone lines are constructed are relieved of a number of unsightly obstructions. This is an important feature in Manila, owing to the narrowness and crookedness of the streets and the overhanging balconies which project beyond the street line in many places.

REFORM OF THE PUBLIC LIGHTING SYSTEM.

On May 3, 1906, the committee on electrical illumination and installation presented a plan for the reform of the public lighting system which has received the close study of the Municipal and Advisory Boards and has been approved in part. This plan was described in detail and illustrated by a map of the city, showing the location of all poles and lights, as well as the proposed location of extensions. It was prepared by a committee composed of the city electrician, superintendent of buildings, and the committee on electrical installation and illumination. Owing to the peculiar conditions surrounding the implantation of civil government under the new Charter of the city of Manila, the public lighting system necessarily has been more or less of a patchwork job. To the lights which were found in the streets at the time of the American occupation additions have been made from time to time in many parts of the city wherever, urgently necessary, to the extent warranted by the limit of available appropriation. The original lighting was supplied under contract by La Electricista and consisted of arc and incandescent lights.

The incandescent lights have never been satisfactory, and, as far as possible, they have been eliminated and substituted by the arcs. The franchise of the Manila Electric Railroad and Light Company to construct, maintain, and operate an electric light, heat, and power system in the city of Manila and its suburbs was granted on March 24, 1903, and this company assumed the existing contracts of La Electricista with the city. The Manila Electric Railroad and Light Company has diligently prosecuted the work of improving the public lighting system and has substantially coöperated with the police and fire departments in the repair of old lines and in the renewal of unsatisfactory or deteriorated lights. In order to correct faulty lights and interruption, the police department is required to promptly report over the alarm system all lights burning dimly or extinguished and all breaks in wires and fixtures. In this way every section of the city is constantly under observation and any irregularities are at once reported to the police headquarters. These in turn are reported to the contracting company and in almost every case repairs and renewals are made in a prompt and satisfactory manner. This system of correction is giving excellent results. A large part of the old system has been rebuilt and during the last few months new lines have been constructed and fed from the new power station, thus gradually reducing La Electricista service, which it is proposed to ultimately suppress. The system to-day is vastly superior to what it has been in any other year since the American occupation. The total number of incandescent lights of the street-lighting system paid for from city revenues is 936, at a contract price of ₱27.27 per annum per light, and 302 arc lights of 2,000 candlepower, exclusive of the harbor lights, madero, and other interior lights at a contract price of ₱196.36 per annum per light. The total cost of the public lighting system, exterior and interior, for the fiscal year 1906, was ₱108,208.98, which sum, in view of the service rendered, is believed to be cheaper than any other American city of approximately the same population and area.

After a carefully observed experiment of fifty inclosed arcs, which were installed in February, 1906, in the districts of Paco, Malate, and Ermita, this new inclosed arc was adopted by the Municipal Board as the type for future extensions in the public lighting system.

The plan for the reform contemplates the elimination of all incandescent street lights. The present annual cost of this class of light, consisting of 936 lamps, paid for from city revenues, is ₱25,524.72. As rapidly as possible the incandescent lights will be suppressed and the arcs substituted therefor, up to the limit of the appropriation. If the Commission approves the amount fixed in the estimate of the Municipal Board, there will be in addition to the sum formerly applied to the payment of incandescent lights about ₱6,000, which may be used for such extensions as may be deemed most necessary. In view of the much reduced strength of the police force, every improvement in the lighting

system will operate not only to the benefit of the public directly but it will be of material aid in the maintenance of order.

As the work of the construction of the new water system progressed it was found necessary to install a line of telephone from the headwaters along the proposed pipe line to the city of Manila, with stations at the various camps and important points of the construction work. This line was erected and is being maintained by the Philippine Islands Telephone and Telegraph Company, under contract with the city, according to the terms of which the city assumes a monthly guarantee of not more than ₱135. This auxiliary line is a great convenience and saves much valuable time and long journeys.

NEW STATIONS REQUIRED.

It is again recommended that a suitable station house be secured in the Malate district. The value of residence property in this section of the city has been increased by many thousands of dollars during the past twelve months and it is reasonable to anticipate that similar improvement will continue in the future. At the present time this is one of the choicest residential districts in the city. The nearest station is located at the intersection of Calles Nozaleda, Herran, and San Marcelino in the district of Paco, and with the most favorable conditions it requires from five to nine minutes for the apparatus to reach points in the district of Malate. Moreover, the Paco fire station is not equipped with a truck company, and if apparatus of this nature is necessary it must be brought from Tanduay, which is on the other side of the river. Arrangements have been made for the use of the old car stable buildings of the Manila Electric Railroad and Light Company, which are erected on city property held under a long lease, on the bay shore opposite Plaza Malate. A section of the building can be fitted up for station purposes at a cost of approximately ₱500. There is a good exit on a broad street and the location is central. A chemical engine could be established at this point which would be of great value, as an ordinary fire could be held under control until the arrival of the Paco apparatus, and in many cases the prompt use of the chemical engine might be sufficient to extinguish the fire. As the city is not in a position to purchase new apparatus, this engine could be diverted from one of the other stations. According to the estimates submitted to the Commission, the department is allowed so small a margin that it will be impossible to expend even the sum of ₱500 on this much-needed improvement during the coming year. Fortunately, the fire losses in Ermita and Malate have been very small, but as the great majority of houses are constructed of imported soft woods and there is very little stone or native hard wood used, the danger from fire is much increased.

In order that Santa Mesa Heights may be properly protected, it will be necessary to establish a station in the vicinity of the Rotonda, equipped

with an engine company. The nearest station to Santa Mesa Heights is located in Tanduary at a distance of about two miles. The high ground is very desirable for residential purposes and many houses have been constructed during the last two or three years in which imported soft woods have been extensively used. It will also be necessary to materially improve the water system, as there is a great scarcity of fire hydrants. Unfortunately, several fires have occurred on the Heights and in the majority the residences were almost totally destroyed.

ADDITIONAL EQUIPMENT REQUIRED.

For the proper equipment of the department it will be necessary to purchase six more horses to replace unservicable animals and those which are at present hired from the department of sanitation and transportation; also 1,500 feet of 2½-inch fire hose and 600 feet of chemical hose, and other general supplies enumerated in the detailed estimate.

DISCIPLINE.

When the present committee on fire assumed the duties of the position in November 1905, the discipline of the department was found in bad shape. The chief was absent on accrued leave after several years' continuous service, and things seemed to be running without proper management or supervision, both on the part of the officers of the department as well as the Municipal Board. There were many dissensions among the men, disobedience of orders was common, in some cases amounting to insubordination, and there was at least one case of open defiance of authority. The acting chief was apparently doing his best to maintain order, but his increased duties in electrical matters prevented him from assuming that active control of all details of the fire-fighting service which is always necessary to insure efficient organization. Measures were at once inaugurated by the new committee to improve conditions, the acting chief was energetically and consistently backed up in his work, and offenders were promptly called to account. On the return of the chief from his accrued leave, every assistance was given him in handling the situation, and he took active control with the result that conditions rapidly improved. A few punishments and the more rigid management served to bring about the desired results, and, at the present time, the discipline and general efficiency of the department are equally good, if not better, than during any period since its organization.

GENERAL OPERATIONS.

The department responded to 124 alarms during the last fiscal year, which is a decrease of 7 over the year 1905. All alarms, with the exception of one or two, were received with promptness over the fire-alarm system, which has been kept in perfect working order by the city electrician's force, and the quick response and efficient work of the department

have reduced the losses to a minimum. A comparison of the losses for the past four years shows a steady reduction, the credit for which must be largely attributed to the increased efficiency and better equipment of the department. The following table is self-explanatory:

Losses for—	
1903	₱1,670,650.00
1904	468,911.00
1905	135,921.00
1906	76,192.90

The loss for 1906 is divided as follows:

Buildings	₱50,175.50
Contents	26,017.40

The total insurance on property affected by fire during fiscal year 1906, according to the records of the fire department, amounts to ₱692,237 on buildings and ₱853,620 on contents.

The total value of all buildings in the city subject to taxation according to the records of the city assessor and collector is ₱35,101,983. The approximate value of all buildings erected during the last fiscal year, plus repairs on old buildings, is ₱2,600,000, which therefore represents the approximate increase in the value of improvements subject to taxation, disregarding the element of one year of deterioration of all old buildings. The total loss due to fire on buildings during the same period was ₱50,175.50, or approximately one-seventh of 1 per cent. According to the annual report of the fiscal year 1905, the damage from fire was slightly less than one-fifth of 1 per cent.

Act No. 1421 appropriated for the fiscal year for—

Salaries and wages.....	₱237,000.00
Contingent expenses	60,450.00
Total	297,450.00

The expenditures were as follows:

Salaries and wages.....	₱238,739.74
Contingent expenses	56,069.89
Total	294,809.63

The above statement shows a decrease in expenditures of ₱22,757.54 over the previous year. This favorable reduction in the cost of operation and maintenance of the Department has been accomplished without any loss in efficiency and is largely due to the elimination of nonrecurring expenses chiefly in the purchase of equipment and in the extension of the fire and police alarm systems.

It is expected that the funds required for the purchase of expendable supplies, repairs, and maintenance will increase as the equipment deteriorates with service. Most of the apparatus was purchased during 1902

and 1903, and the constant care which has been exercised by the engineers and officers in charge has served to keep the machinery and vehicles in such condition that very little heavy repair work was necessary, despite the fact that all of this class of equipment goes to pieces very rapidly in a tropical climate. During the past year a great part of the repairs to apparatus was executed by the engineers of the department under the supervision of the chief engineer, and many improvements, minor alterations, painting, etc., have been accomplished by the regular firemen. This has resulted in a material saving to the city.

INSPECTIONS.

The usual inspections of the various districts of the city have been performed by the proper officers of each station, and the fire hydrants have been examined each month and tested by opening the plugs and flushing out the valves. Until January, 1906, the general inspection was made by the commanding officers of the stations of all stores, tiendas, and warehouses, and, in this way, the storage of combustibles and explosives was regulated; but since January the subdeputy chief of the department, who was appointed temporarily, performed these monthly inspections in all districts of the city. All powder and high explosives have been stored in San Juan del Monte magazine, and the regulations governing transportation for such materials have been carefully observed. Three hundred and twenty storage and 226 transportation permits were issued during the year. All fireworks are stored outside of the business districts and all large amounts of petroleum, gasoline, calcium carbide, etc., are isolated in the outlying districts. This rigid inspection system largely accounts for the small number of conflagrations and the small area covered by them. All ordinances concerning the fire department have been strictly enforced. Owing to the varied nature of the performances given at the numerous cinematograph shows, such places have been classed as theaters and the owners have been required to furnish fire protection in conformity with section 2 of Ordinance No. 40. All the engines of the department were tested monthly and kept in good condition, and the hose has been tested up to 300 pounds.

The coöperation of the police with this department is substantial and effective and in all cases the firemen have had a free field in fighting fires.

ELECTRICAL WORK.

Twenty-one new fire-alarm boxes were installed, bringing the total now in use up to 153 street alarms. Two auxiliary fire-alarm systems installed in the custom-house and the Government Laboratories were connected to the city system. Extensions were made from Calle Peñafrancia and Real in Paco to the military road at Santa Ana and along Calle Peñafrancia four blocks toward Pandacan; from Calle Herran along

Calle H to San Andres; from Calle E along Isaac Peral to San Jose; from Calle Misericordia along Obando to Espeleto; from Paz (Santa Ana) along San Rafael to the water main; Calle Pavia to the Cotton Mills; Calle Soledad to Barraca; Magdalena to O'Donnell; Azcarraga along San Jose to Soler; and other short lines have been built from Lardizabal, Singalong, Carriedo, Principe, Magdalena, Aceiteros, and Soledad.

The police alarm has given perfect satisfaction in constant operation on a three and five minute schedule. Sixty-two police boxes were installed and the extensions covered a large portion of the outlying districts of the city. Several portions of the police and fire alarm circuits were rebuilt and 364 50-foot poles were set. All the shorter poles, which were taken out of the interior of the city, where a greater height is required, were reset in the outlying districts. The entire construction of both systems is now standardized and in first-class condition. Nine poles were broken by the typhoons, but they were cut to 35 and 40 foot lengths and used on the suburban extensions.

The change in the public and private lighting current from 110 to 220 volts has materially increased the inspection duties of this branch of the department. About 350 installations yet remain to be remodeled to the 220-volt current; 2,847 permits were issued for remodeling and for new installations, and 2,427 for certificates of inspection. Between July 1, 1905, and May 15, 1906, ₱7,008.05 were collected by the city electrician and deposited. On May 16, 1906, the collection work was transferred from the city electrician to the city assessor and collector, thus relieving the former of this money accountability. The fees of inspection collected by the city assessor and collector up to June 30, 1906, amounted to ₱859.45. The total receipts for the year show an increase of ₱4,068.20 over the last fiscal year.

During the year 1,628 telephone lines fell on the street and there were ninety-six calls to remove hot wires of the telephone and electric-light companies. This large number of fallen wires is due principally to the faulty construction of the Manila Telephone Company, which is now being removed from the streets, the said company having been merged with the Philippine Islands Telephone and Telegraph Company. The usual repairs were made to all electric appliances belonging to the city, including the remodeling and installation of lights, fans, bells, etc.

GENERAL OBSERVATIONS.

An extended study has been made of a plan for lighting the Luneta. At the present time the arc lights are supplied from La Electricista, and therefore the high poles of the old construction have been retained. The illumination is fairly satisfactory but unsightly and not at all suited to a public show place of this kind. As soon as the revenues will permit

the new inclosed arc will be substituted, mounted on shorter and more ornamental fixtures. It may be possible to reduce the number of lamps, or at least to reduce the candlepower. The new light is stronger and more satisfactory than the old. Being nearer the ground it is believed the change will be a material improvement and in harmony with the surroundings.

The contract entered into by the former government of the city of Manila, which has been continued by the new municipality and which does not expire for several years, provides that the lights in the public places shall be burned for twelve hours each night of the year under an annual tariff. Thus no modification in price could be secured by a reduction in the hours of operation. However, it is believed that satisfactory modifications may be adopted which will permit of the introduction of the Luneta system. The advisability of such a modification is a matter for serious consideration.

It has been noted with much satisfaction that the firemen, especially the Filipinos, are taking more pride in their personal appearance. There has been an increase in the number of requests received from probational members to wear the uniform, which is a privilege only credited to those who can obtain the recommendation of their commanding officers. A better class of men of both grades is seeking employment, and there has been no difficulty in securing good men to fill vacancies. The Filipino firemen in particular render uninterrupted service and they value their position very highly. The constant training under experienced American officers is entirely satisfactory and many second-class firemen are exceedingly efficient, and when operating under the direction of officers they perform their duties in a way which promises well for the future. The second-class men have learned to use their heads and to study the methods of attacking a fire, and those who have had two or three years' experience are less liable to confusion or to expose themselves to unnecessary danger, or to lose time in useless activity. All the men who resigned had better positions in view, and several of the first-class men have returned to the United States for the purpose of going into business. Wherever possible these vacancies have been filled by promotions from the second-class.

Owing to the graduated scale of salaries under the system of longevity pay for engineers and firemen, the maximum to be paid to the present force will not be reached, except in a few cases, until the fiscal year 1909. At the time the estimates were under consideration by the Municipal Board and there was a pressing need for rigid economy it was decided to suspend longevity pay in this department, with the exception of six of the most meritorious cases during the fiscal year 1907. Subsequent investigation leads to a consideration of the advisability of this act. The number of men affected by the increase of pay, due to length of

satisfactory service, is sixty, and the additional amount of money which would be required to pay the scale of increase, provided that every man eligible by reason of length of service should receive his additional salary, does not exceed ₱4,385.28. Undoubtedly several members of the department would not be eligible owing to unsatisfactory service or punishments imposed, and therefore this sum can safely be reduced. While this longevity increase is not a vested right, nevertheless the men have come to consider it their just reward for faithful and satisfactory service, and the wisdom of enforcing this small economy is a question for consideration at the time the estimates are under discussion before the Commission.

The firemen's relief association has been satisfactorily conducted by officers elected by the men, and valuable assistance has been given in several worthy cases.

In the annual report of last year it is noted that all stations used by the department belonged to the city. This should be corrected, for the reason that Intramuros station, No. 4, is claimed by the Insular Government and is occupied under a temporary agreement with the city.

DEPARTMENT OF ASSESSMENTS AND COLLECTIONS.

Under and by virtue of Act No. 1407 the department of assessments and collections of the city of Manila was merged with the Bureau of Internal Revenue January 1, 1906, and the Collector of Internal Revenue became *ex officio* city assessor and collector. The Reorganization Committee recommended the change on the ground of economy, representing to the Commission that a considerable saving to the city would be effected by such a consolidation. That the committee were sincere in their representation and recommendation we will not question, but it was nevertheless a most unnatural and ill-advised scheme and so far has not resulted in any material saving to the city; nor have the revenues been more satisfactorily collected, while the city has been deprived of one of its principal attributes, that of immediately directing the collection of its own revenues.

The department was one of the largest of the city departments and in the States would have been divided into at least four distinct public offices. The Board already regrets its action in acquiescing to the proposition and believes now that the scheme should have been thwarted.

By the consolidation the city was deprived of an annual revenue of nearly ₱5,000 from rent of a portion of the building known as 149 Calle Anloague and now occupied by the consolidated offices in addition to the old quarters.

For your further information relating to the work of the department of assessments and collections, we quote the following from the city assessor and collector's annual report to the Board:

Real-estate tax.—In the last report of the city assessor and collector covering the fiscal year ended June 30, 1905, it was stated that the assessment rolls were in better shape than at any previous time. During the fiscal year ended June 30, 1906, surveys of the various blocks were continued, and the further perfection of the assessment rolls has made satisfactory progress. It will take further time to complete this work as originally outlined.

In accordance with the provisions of the Manila Charter a new general assessment of all the real property in the city of Manila was made for year 1906. The work of making this assessment has been conducted for the past two years by the city assessor and collector and his force of employees, and important data relative to the rentals, sales of property, etc., in all parts of the city has been collected and compiled. The officers and employees charged with making this assessment have had several years' experience, and have had for reference two former assessments, one made by the city assessor and collector in 1901-2 and the other by the board of tax revision in 1903. All new streets, blocks, and lots laid off, as well as new buildings erected or improvements made to existing properties, are at once platted by employees of the division of real-estate assessments in this office. The maps already compiled are even now found to be of great assistance to property owners and are a constant source of valuable and reliable information to would-be purchasers of city property. As the time passes and further data, now being gathered by the assessors, is recorded, the value of these maps will increase. All of this data is open to inspection by the public.

Slight errors and irregularities have been discovered in the two former assessments. It is believed that the board of tax revision has eliminated most of the errors found in the preceding assessments. The best evidence that city property is now assessed at approximately its true value and that the assessment is, all things considered, an equitable one, is found in the fact that of the 15,780 different pieces of property assessed, and now appearing on the tax rolls, aggregating in value ₱80,525,235, appeals to the board of tax revision from the valuations fixed by the city assessor and collector were taken only in the case of 298 parcels, aggregating in value ₱6,868,077. The board of tax revision took action favorable to the applicants in only 34 cases out of the 298 appealed.

The original assessed value of all city property for 1905 was ₱77,754,354. To this there were added further properties worth ₱176,449, discovered after the completion of the original rolls, making a final total assessment for 1905 of ₱77,930,803. For the purpose of making a comparison between the figures for that year and for the year 1906, the totals must be reduced by (1) the value of all buildings destroyed during 1905, ₱319,694, (2) cancellations made on account of

erroneous and double assessments, ₱152,474, and (3) all additional exemptions granted during 1905, ₱502,752, making a total reduction of ₱974,920, and leaving for comparative purposes ₱76,955,883 as the assessment of 1905.

The 1906 assessment amounts to ₱80,525,235, from which, for comparative purposes, there must be deducted the value of new buildings erected since the 1905 assessment was completed, equal to ₱2,682,606. This leaves the 1906 valuation at ₱77,842,629, or an increase over the 1905 assessment of ₱886,746. This increase is equal to but a fraction over 1 per cent and is not the result of a general raising of values throughout the city, inasmuch as some valuations have been reduced and others have been increased. Equitable valuation and not forced increases has been the watchword.

The following statement shows the comparative valuation of real estate by districts as of record in the assessment rolls at the beginning of each year:

District.	1903.	1904.	1905.	1906.
Intramuros	₱7,229,404	₱5,022,728	₱5,053,954	₱4,896,697
Binondo	18,826,550	18,576,184	18,779,422	18,671,529
San Nicolas	12,662,338	13,027,050	13,249,290	13,272,457
Santa Cruz	7,410,904	7,701,846	7,992,546	8,578,001
Quiapo	7,254,200	4,411,414	4,600,292	4,822,367
San Miguel	4,687,890	4,962,362	5,006,108	4,976,038
Sampaloc	3,165,798	3,596,696	3,827,772	4,061,086
San Lazaro estate	329,940	458,170	538,066	579,404
Tondo	3,558,448	3,965,116	4,156,914	4,673,891
Ermita	5,689,520	6,271,494	6,708,748	7,155,925
Malate	2,602,030	2,752,768	3,037,502	3,569,165
Paco	2,647,850	2,898,160	3,546,338	3,982,540
Pandacan	342,806	358,796	431,016	440,531
Santa Ana	799,468	812,752	826,386	845,654
Total	74,207,154	74,815,536	77,754,354	80,525,235

The following shows the comparative value, by districts, of new buildings erected during each year:

District.	1903.	1904.	1905.	Total.
Intramuros	₱106,990	₱87,146	₱29,200	₱223,336
Binondo	384,390	250,676	190,272	825,338
San Nicolas	379,768	353,912	248,900	982,580
Santa Cruz	312,330	302,520	207,268	822,118
Quiapo	190,442	196,516	249,738	636,696
San Miguel	286,944	141,356	56,290	484,590
Sampaloc	446,422	273,670	306,650	1,026,742
San Lazaro estate	128,230	79,158	110,764	318,152
Tondo	392,622	209,656	223,398	825,676
Ermita	682,394	522,338	587,526	1,792,258
Malate	191,610	332,924	194,642	719,176
Paco	250,642	653,026	235,744	1,139,412
Pandacan	16,532	74,788	9,970	101,290
Santa Ana	15,004	12,160	32,244	59,408
Total	3,784,320	3,489,846	2,682,606	9,956,772

REAL-ESTATE TAX COLLECTIONS.

During the entire fiscal year ended June 30, 1906, taxes, penalties, and interest have been collected in the sum of ₱1,208,265.31, being current and back taxes distributed as follows:

1901	₱192.38
1902	10,638.66
1903	7,911.92
1904	32,998.69
1905	470,404.37
1906	686,119.29
Total	1,208,265.31

Matadero.—Collections at the matadero have fallen short of the estimate made by the city assessor and collector in his last report by about ₱15,000, and is due to the scarcity of cattle available for slaughter. The Islands furnish very few cattle for this purpose, and until just recently Hongkong was the only market from which importations of cattle were received. Several importations have recently been received from Saigon, and it is believed that with this competition the price of cattle will be reduced and that the collections will be somewhat larger during the fiscal year ending June 30, 1907, than they were during 1906. The expense of operating the matadero has been reduced by about ₱2,000 as compared with 1905. The following statement shows the number of animals slaughtered, the weights in kilograms, and the fees collected:

Animal.	Num- ber.	Weight in kilos.	Cost per kilo.	Fees col- lected.
Cattle	18,308	2,662,366	₱0.03	₱79,870.98
Hogs	46,674	2,472,969	.03	74,189.07
Suckling pigs	6,798	199,477	.03	5,984.31
Sheep	12	163	.03	4.89
Total				160,049.25

Public markets.—There has been no change either in the number or location of the public markets since the date of the last annual report of the city assessor and collector. Of the nine public markets, losses in the collections for the fiscal year 1906, as compared with the collections for the fiscal year 1905, are shown in the case of seven, as follows:

Divisoria	₱10,230.80
Quinta	10,808.96
Arranque	6,461.07
Sampaloc	481.55
Herran	54.82
Anda	1,192.11
Santa Ana	202.92

Increases as follows are shown in the collections made in two of the markets:

Gagalangin	₱234.23
Pandacan	453.62

The following statement shows the collections at each market during the fiscal year 1906:

Market.	Total six months ending—		Total fiscal year ending June 30, 1906.
	Dec. 31, 1905.	June 30, 1906.	
Divisoria	₱75,513.80	₱72,239.90	₱147,753.70
Quinta	33,637.85	28,868.21	62,506.06
Arranque	12,797.60	12,077.45	24,875.05
Sampaloc	3,918.55	3,627.90	7,546.45
Herran	6,167.35	5,906.57	12,073.92
Anda	1,295.28	923.10	2,218.38
Santa Ana	837.61	775.67	1,613.28
Gagalangin	405.16	445.80	850.96
Pandacan	639.15	550.34	1,189.49
Tetuan	2,358.47	47.54	2,406.01
Bay	2,537.00	92.59	2,629.59
Estero	3,635.88	132.11	3,767.99
Total	143,743.70	125,687.18	269,430.88

The total market fees collected for the fiscal year 1906 amount to ₱269,430.88, as compared with ₱304,916.34 collected during the fiscal year 1905, resulting in a loss of ₱35,485.46.

This loss is largely attributable to the suspension, by the Municipal Board, of collections at bay and estero landings.

Municipal licenses.—Under the provisions of existing ordinances only the following occupations, trades, professions, and objects are subject to the payment of municipal licenses: Dealers in spiritous, vinous, and fermented liquors, peddlers (excepting those who sell only native vegetables, fruits, or foods personally carried by themselves), auctioneers, plumbers, hotels, restaurants, lodging houses, livery stables, race tracks, public vehicles, and dogs.

Practically all occupations, trades, and professions were subject to the payment of municipal license taxes during the first half of the fiscal year ended June 30, 1905. On January 1, 1905, the Municipal Board's powers to impose license taxes were greatly curtailed by the provisions of Act No. 1189 of the Philippine Commission. This largely accounts for the falling off of over ₱70,000 in the collections from this source during the fiscal year ended June 30, 1906, as compared with the fiscal year ended June 30, 1905.

Liquor licenses.—Collections from the sale of liquor licenses during the fiscal year 1906 were ₱184,278.64, as compared with ₱201,324.86 during the fiscal year 1905, which shows a loss of ₱17,046.22.

Liquor licenses were issued and transferred during the fiscal years 1905 and 1906 as follows:

Class of license.	Fiscal year ended June 30, 1905.			Fiscal year ended June 30, 1906.			In- crease.	De- crease.
	Issued.	Trans- ferred.	Total.	Issued.	Trans- ferred.	Total.		
First-class bar	93	16	109	92	28	120	11	
Second-class bar	99	18	117	93	23	116		1
First-class restaurant liq- uor	41	3	44	38	6	44		
Second-class restaurant liquor	22	4	26	28	5	33	7	
First-class hotel liquor	8		8	3		3		5
Theaters	5	2	7	5	5	10	3	
First-class wholesale liq- uor	42	4	46	29	1	30		16
Second-class wholesale liquor	7	2	9	3	1	4		5
Third-class wholesale liq- uor	6	1	7	4	4	8	1	
Grocery liquor	80	8	88	72	8	80		8
Distiller's	8	1	9	6		6		3
Druggist's	4		4	3		3		1
Brewer's	1		1	1		1		
Native wine	2,638	206	2,844	2,741	225	2,966	122	
Total	3,054	265	3,319	3,118	306	3,424	144	39

NOTE.—The above does not include 23 incorporated clubs which pay internal-revenue license tax to serve liquors to their members.

Business licenses.—There are only eight occupations, trades, or professions now subject to the payment of municipal business licenses, hence the relatively small collection of only ₱6,770.57 during the last fiscal year as compared with ₱37,518.72 collected under this head during the fiscal year 1905.

Public-vehicle licenses.—The collection from this source aggregated ₱13,621.10, or only ₱578.45 less than was collected for the year preceding. From this it would appear that either the electric railway is making very little inroad on the traffic of public vehicles or that the people of Manila are more on the go now than they were before the street cars were installed. There is a constant increase from month to month in the number of vehicle licenses issued. There were licensed during the year 2,079 one-horse rigs, 63 two-horse rigs, and 792 carabao carts; 187 licenses were transferred and 404 duplicates issued.

The quality of the public vehicles has been somewhat improved, as it is the policy of this office to license only such rigs as are in good condition and drawn by healthy looking animals.

Entertainment and peddlers' licenses.—Receipts under this head for the fiscal year 1906 amount to ₱8,740 as compared with ₱25,126.80 collected during the fiscal year 1905, resulting in a loss of ₱16,386.80. This decrease is due to the repeal of certain municipal license taxes by the provisions of Acts Nos. 1189 and 1338 of the Philippine Commission. Act No. 1189 repealed the provisions of law for issuing licenses to theaters and other places of amusement, and Act No. 1338 so amended

the license ordinances as to exempt peddlers selling native vegetables, fruits, and foods, carried by themselves, from the payment of a municipal license tax. At present the only concern subject to a municipal entertainment license is the San Lazaro racing club, which pays an annual license tax of ₱200 and a fee of ₱10 for each day that races are run. Races were run on one hundred and fourteen days during the year, which, with the ₱200 annual tax, makes the total annual taxes paid by this club ₱1,340.

Registration of live stock.—This is the only Spanish law imposing municipal taxes that has not been repealed. It is not known whether copies of this law are extant; a copy has never been in the possession of this office. Collections are made by virtue of an order of the provost-marshal-general, which, by the provisions of the Manila Charter, was continued in force after the establishment of civil government. Under the existing schedule of charges the fees are so small that the collections hardly pay the expense of enforcing this law. It is impracticable to require proof of ownership as is done throughout the provinces under the provisions of Act No. 1147. It is recommended that the provisions of Act No. 1147 be made applicable to Manila. During the year covered by this report 2,925 animals have been registered at a fee of 20 centavos each and 2,008 transfers of ownership have been recorded at a fee of 10 centavos each, making a total collection of ₱785.80 as against ₱814.75 for the year 1905.

Manila Electric Railroad and Light Company; franchise tax.—By the provisions of its charter the Manila Electric Railroad and Light Company pays to the city of Manila $2\frac{1}{2}$ per cent of its gross earnings from fares collected, tickets sold, and electric light and power sold. In consideration of the payment of this franchise tax the company is exempted from the payment of all other taxes, except the real estate tax. The sum of ₱28,662.85 was collected from this company during the fiscal year 1906, representing twelve monthly payments. A comparison with the collections for the fiscal year 1905 would be valueless, as the company only began operations in April, 1905.

Statement of collections for 1906 and estimate of collections for 1907, by city assessor and collector.

Source of revenue.	Receipts fiscal year 1906.	Estimated receipts for fiscal year 1907.
Land tax	₱1,208,265.31	₱1,250,000.00
Industrial tax	1,191.81	
Certificates of registration (old law)	846.00	
Stamp sales (old law)		
Matadero tax	160,049.25	160,000.00
Market tax	269,430.88	260,000.00
Licenses	217,958.16	240,000.00
Live-stock registration	785.80	750.00
Vehicle tax		
Vehicle equipment	1,231.30	1,000.00
Rents, city property	18,730.29	20,000.00
Municipal court fines	68,500.77	70,000.00

Statement of collections for 1906 and estimate of collections for 1907, by city assessor and collector—Continued.

Source of revenue.	Receipts fiscal year 1906.	Estimated receipts for fiscal year 1907.
Pail system	₱59,327.16	₱70,000.00
Vault cleaning	38,691.85	30,000.00
Weights and measures	6,410.40	900.00
Water rents	210,738.69	220,000.00
Building permits	17,958.90	20,000.00
Boiler inspections	1,070.00	1,200.00
Board of health	15,048.00	15,000.00
Justice of peace fees	6,757.90	6,000.00
Sheriff's fees	13,689.36	12,000.00
City attorney	192.26	400.00
City electrician	7,868.70	8,000.00
Secretary Municipal Board	69.00	50.00
Pound receipts	4,077.00	4,000.00
Miscellaneous	13,811.70	10,000.00
Sales of city land	2,644.30	50,000.00
Cemeterio del Norte	13,425.09	7,500.00
Franchise tax (Manila Electric Railroad and Light Company)	28,662.85	34,000.00
Internal-revenue dividend	74,876.93	205,000.00
Transportation of meat	3,470.74	8,500.00
Total	2,465,780.40	2,704,300.00

Expenses.—The actual net expense during the year for the collection of the city revenues, which was borne wholly by the city of Manila, is as follows:

Salaries and wages	₱89,011.04
Contingent expenses	15,467.15
Total	104,478.19

Or a fraction over 4.2 per cent of the total collections.

Markets and slaughterhouse.—The receipts from markets have suffered considerable decrease—from ₱304,915.98 in 1905 to ₱269,430.88 during this last fiscal year. The difference of ₱35,485.10 is due partly to the resolution referred to by the law department in this report, suppressing the collections that were formerly made at the wharves, shores, and other places—which collections were included in the items denominated “Tetuan, bahia, and estero”—and partly to the reduction in the city’s population observed during the last two years and brought about by the great facilities of transportation afforded by the electric tramway and the railroad branch to Antipolo.

The new Sampaloc market will be opened to the public in July next, when one of its sections will have been completed.

The receipts from the slaughterhouse have likewise shown a decrease of ₱9,303.75 as compared with the revenue derived therefrom in the fiscal year 1905, due partially to the fact that the people are not now so much prejudiced against Australian refrigerated meats sold at a cheaper price than fresh beef; this latter obtained wholly from China. It is to be expected that this competition will prove advantageous to the consumers.

The following table shows the receipts from the various city markets and the total income as compared with the fiscal year 1905. The collection expenses represent 7 per cent of the market and 6 per cent of the slaughterhouse receipts.

The uselessness of the Anda market calls for its closure, and likewise some reforms in the operation of the smaller markets, in order to reduce the expenses of collection and maintenance to 6 per cent.

In former years the transportation of meats from the slaughterhouse to the markets was done by a contractor, who collected daily from the slaughterers for this service at the rate of from $7\frac{1}{2}$ to 12 centavos per quarter. At the termination of the contract in February this service was assumed by the department of transportation and sanitation, at the rate of 7 centavos per quarter, having produced an income of ₱3,470.74, against an outlay of ₱2,642, affording in five months a profit of ₱827.14 and greater efficiency in the service:

Market.	Receipts.	Expenses of collections.	Outlay for lighting, cleaning, repairs, etc.	Net receipts.	
				1906.	1905.
Divisoria.....	₱147,753.70	₱9,619.90	₱9,591.22	₱128,542.58	₱139,976.00
Quinta.....	62,506.06	3,999.30	7,592.42	50,914.34	63,432.47
Arranque.....	24,875.05	2,580.00	8,591.58	13,703.47	19,981.59
Sampaloc.....	7,546.45	460.70	2,524.61	4,561.14	5,279.45
Herran.....	12,073.92	754.60	1,897.79	9,421.53	10,029.11
Anda.....	2,218.38	695.00	1,643.51	*118.13	906.64
Santa Ana.....	1,613.28	351.30	504.47	757.51	382.69
Gagalangin.....	850.96	384.00	429.48	37.48	83.07
Pandacan.....	1,189.49	377.24	373.54	438.75	419.43
Tetuan.....	2,406.01	242.00	-----	2,164.01	2,258.16
Bay.....	2,629.59	802.40	-----	1,827.19	4,782.30
Estero.....	3,767.99	249.50	-----	3,518.49	6,102.63
Total.....	269,430.88	20,513.90	33,148.62	215,768.36	253,633.54
Slaughterhouse.....	169,049.25	9,599.88	1,095.91	159,353.46	154,567.10
Grand total.....	429,480.13	30,113.78	34,244.53	375,121.82	408,200.64

* Anda market shows a deficit of ₱118.13, and that amount is deducted from the receipts of the other markets.

CITY SCHOOLS.

EXPENSES OF CITY SCHOOLS.

The city's relations with the educational branch are purely of an economic nature, and we are therefore to consider the schools from that point of view.

Section 59 of the Manila Charter sets apart 25 per cent of the total collection of the tax on real property for defraying the expenses of the city public schools. In the last fiscal year the total revenue from that tax was estimated at ₱1,152,580; the approximated amount to be devoted, therefore, to this obligation was ₱288,145. Act No. 1421 appropriated for expenses of city schools the sum of ₱264,253. To this sum

must be added the expense incurred for the lighting, care, rentals, and maintenance of the buildings and the force employed for their care and cleaning, so that the amount expended by the city for this service far exceeds the above-mentioned sum of ₱288,145.

ATTENDANCE AT THE SCHOOLS.

The number of children who attend the schools is daily increasing, as may be seen in the following statement:

School enrollment during the month of June, 1902-1906.

Month and year.	Day schools.	Night schools.
June, 1902 -----	2,244	1,556
June, 1903 -----	3,046	2,626
June, 1904 -----	5,767	5,043
June, 1905 -----	7,803	5,334
June, 1906 -----	8,311	(*)

* The night-school funds for the fiscal year 1906 having been exhausted, it was not possible to open the night schools in June. They were opened on July 9. The attendance of same for July was 1,405.

The yearly increase of attendance of the city schools renders necessary a greater number of schoolhouses and greatly increases the expense of their rental and maintenance. It is to be regretted that the city resources are so limited as not to permit the devotion of a much larger sum to this obligation.

SCHOOL DISTRICTS.

To the five districts existing during the expired year, one other has been added at the beginning of the present fiscal term, as follows:

First district: Santa Ana, Pandacan (Beata, Peñafrancia), Paco (Santibañes, Tanque, Looban, Bangbang, Singalong).

Second district: Malate (except subdistrict of Singalong), Ermita (Concepcion), Intramuros.

Third district: San Miguel (Uli-Uli), Sampaloc (Santa Mesa, Santol, Mangahan, San Roque, Balic-Balic, San Isidro, Calubcub, Sulucan).

Fourth district: Quiapo, Santa Cruz (Dulumbayan, San Lazaro).

Fifth district: Binondo (Meisic, Trozo).

Sixth district: San Nicolas, Tondo (Tutuban, Palumpung, Tayuman, Gagalangin, Lico).

SCHOOLHOUSES.

The number, location, and monthly rental of the city schoolhouses, according to the report of Mr. C. H. Magee, acting superintendent of city schools, is as follows:

Buildings and location.

Name of buildings.	Location.	Monthly rental.
American	417 Calle Nozaleda	P500
Commercial	38 Calle Gunao	260
Concepcion	92 Calle Concepcion	115
Chinese	72 Calle Asuncion	(*)
Ermita	41 Calle Gallera	100
Gagalangin	Calle Gagalangin	(*)
Intramuros	205 Calle Real	200
Meisic	8 Calle Meisic	(*)
Malate	417 Plaza de Malate	(*)
Manila High School	172 Calle Victoria	(*)
Paco Boys'	396 Calle Real	180
Paco Girls'	398 Calle Real	100
Pandacan	2 Calle San Jose	80
Paco Intermediate	269 Calle Herran	150
Quiapo Boys'	57 Calle Noria	150
Quiapo Girls'	28 Calle Concepcion	150
Sampaloc	89 Calle Alix	300
Sampaloc Intermediate	13 Plaza de Santa Ana	300
Santa Mesa	446 Calle Santa Mesa	130
Santa Ana	6 Calle Panadero	50
Santa Cruz Boys'	608 Calle Bilibid	350
Santa Cruz Girls'	255 Calle Lacoste	125
San Nicolas	177 Calle Madrid	300
Singalong	146 and 147 Calle Singalong	80
San Miguel	129 Calle Rafael	180
Tondo	569 Calle Lemery	225
Tondo Intermediate	568 Calle Lemery	270
Trozo	232 and 59 Calle Diaz and Latorre	350

* Owned by the Government.

Regarding this matter, the following comments are made in the report above referred to:

A number of undesirable buildings have been vacated during the past year and better buildings for school purposes secured.

Cuartel Meisic, which was formerly occupied by the military authorities, has been secured for school purposes. When these buildings have been repaired and adapted for school purposes they will accommodate about 2,500 pupils. The following schools will be transferred to Cuartel Meisic: Tondo Primary School, 569 Calle Lemery; Tondo Intermediate School, 568 Calle Lemery; Trozo Boys' School, 232 Calle Diaz; and the Trozo Girl's School, 59 Calle Latorre. The school formerly located at 129 Calle Aceiteros was moved to Cuartel Meisic at the opening of the present school year. This will result in the consolidation of five schools and in a saving of about P12,000 in rental.

The following schools are now quartered provisionally in Meisic: The Aceiteros Primary School, one kindergarten, the domestic science laboratory, and the school of telegraphy.

Negotiations have been completed for securing from the military authorities the quartermaster shops in San Nicolas. It is proposed to transfer the school now located at 177 Calle Madrid, San Nicolas, to the quartermaster shops. This will result in a saving of P3,600 in rental, and will provide accommodations for about 200 more pupils.

There is a possibility that the building now occupied by the Engineer Corps, Malecon Drive, will be turned over for school purposes. In that case it is proposed

to transfer the third-grade pupils from the Intramuros Primary School to this building.

Further on he recommends:

The greatest need of the city schools is better buildings. The city at present owns four of the buildings now occupied by the public schools. Of these four buildings, one has been erected since American occupation, namely, the school of Gagalangin, costing some ₱2,500. The other buildings were erected during Spanish occupation. The best building is the one now occupied by the Manila High School, 172 Calle Victoria. Last year the city paid about ₱65,000 in rentals for school buildings. In place of paying out rental for school buildings from year to year the following plan is suggested: That the money now paid in rental be used to pay interest on an issue of bonds, the principal to be used to erect new buildings. The sum of ₱65,000 would pay the interest on 4 per cent bonds to the amount of ₱1,625,000. Allowing ₱100,000 as the cost of a building suitable for 1,000 children and ₱200,000 for the purchase of the necessary land, it would be possible to erect fourteen such buildings with the same annual expenditure. The type of building recommended is one similar to the building now occupied by the Manila High School, 172 Calle Victoria, Intramuros, modified to suit the present needs.

It is recommended that one building of this type be erected in the present school year and that it be located in the district of Tondo. Tondo with its population of 40,000 does not possess a suitable building for school purposes either owned by the government or by private parties.

It is recommended that an American school be erected in Paco, with accommodations for 400 students, including the kindergarten.

The scheme suggested by the acting superintendent, for the city to erect buildings the cost of which is to be met by means of a loan, is not possible. The Charter of Manila does not empower its government to enter into such operations.

The liberal attitude of the Insular Government regarding this matter is shown by granting to the city the use of buildings which were formerly occupied by the War Department and which upon being evacuated by the military are turned over to the Civil Government. This leads to the hope that at no distant date and by this means the much-felt need of buildings for school purposes in Manila will in great measure have been supplied.

TEACHER'S SALARIES.

The number of teachers employed in the city schools, together with the salary drawn by each, is detailed in the following table taken from the report of the acting superintendent:

Number of teachers employed and monthly salaries paid, June 30, 1906.

Name of school.	P40.	P40.	P50.	P60.	P70.	P80.	P90.	P100.	P110.	P120.	P130.	P140.	P150.	P160.	P170.	P180.	P190.	P200.	P210.	P220.	P230.	P240.	P250.	P260.	Total.
American ^a	1													1				4				2	1	1	10
Commercial						2												5							13
Concepcion			1	2				1														2			4
Chinese										1															1
Ermita		1			1	1	1	1																	5
Gagalangin					1	1	1																		3
Intramuros		1	1	1	4	1	1																		9
Meisic ^b	2		1	1	1	1	1							1											6
Malate		1	2	2	3	3		1																	12
Manila High ^c					2													5		1	1	1	1	1	12
Paco Boys'		1	1	1	3		1																		7
Paco Girls'			1	1	1																				3
Pandacan			1	4	2		2																		9
Paco Intermediate													1												1
Quiapo Boys'	1		1	1		3		1		1								3							10
Quiapo Girls'			1	1	1	1																			3
Sampaloc	1		1	3	5	3		1																	14
Sampaloc Intermediate			2					2		1				1		2						1			8
Santa Mesa		1	1	2	1	1	1	1										1							8
Santa Ana	2			1	2	1																			6
Santa Cruz Boys'	3	1	2	3	1																				11
Santa Cruz Girls'	1		1		2			1		1															5
San Nicolas	3	1	3	2	1	2				1															13
Singalong	1		2	1	1	1																			6
San Miguel	2	1		3	1	2																			9
San Miguel Kindergarten																	1								1
Tondo		1	1	6	8	1	1	1																	19
Tondo Intermediate	1		1				1						2	1	1			1					1		9
Trozo		2	1	4	2	1																			10
Trozo Kindergarten																	1								1
Supervisors																						3			3
Unassigned	1		2		6	1												5							15
Total	19	11	27	39	51	23	7	5	4	4	6	5	2	3			23	1	1	1	1	8	4	2	245

^aIncludes high, grammar, primary, and kindergarten.

^bIncludes primary and kindergarten.

^cIncludes high and intermediate.

^dTemporary teachers who do not receive vacation pay.

DEPARTMENT OF SEWER AND WATERWORKS CONSTRUCTION.

The definite schemes for these works were approved, that for the water supply on June 20, 1905, and for the sewer system on July 22 of the same year.

Before the approval of these schemes the preparation of complicated preliminary studies became necessary, in order to determine upon the most suitable system to be adopted in one and the other. (See annual reports for 1903 and 1904.)

WATER SUPPLY.

The scheme of the system of water supply, due to Mr. J. F. Case, chief engineer of this department, takes the water for Manila from the Mariquina River at a point situated in an extreme suburb of the town of San Mateo, about 16 miles above Santolan, the present intake of the present water-supply system. At the said initial point of this work, by means of a dam and its corresponding gates, a section of the river is to be converted into a reservoir of 2,000,000,000 gallons' capacity, at an elevation of about 212 feet above sea level. One mile distant from the San Juan deposito, at a point situated about 112 feet above

sea level, another reservoir of about 50,000,000 gallons will be built, from which the water will be distributed to the city, the present reservoir of 16,000,000 gallons' capacity remaining as a reserve deposit.

From the dam to the distributing reservoir the water will flow by its own gravity, passing through iron pipes of 42 inches in diameter for a distance of $10\frac{1}{2}$ miles, wherein the force of gravitation exacts strong, resistant piping, and through a cement-built tunnel for a distance of $4\frac{1}{2}$ miles wherein the water will flow on the hydraulic gradient and no great resistance in the walls of the conduit is required. This tunnel section begins at the distributing reservoir and extends $4\frac{1}{2}$ miles therefrom.

The water from the distributing reservoir will be carried by means of the present system, plus the necessary increase, so that the most extreme suburbs of the city will be amply supplied.

This scheme is to be carried out by contracts for the construction of the work and for the supply of the necessary material, in three separate divisions which shall, respectively, comprise:

1. (a) Dam and heads works; (b) furnishing steel plates and rivets; (c) manufacturing and laying steel pipe; (d) tunnel and conduit; (e) reservoir and gatehouse works.

2. Works comprising storage reservoir above the dam, certain masonry bridges, culverts, etc.

3. The extension of the distribution system throughout the city; but the extent of the same can not be determined in advance, because it depends upon the remaining appropriation for the two previous sections.

On January 2, 1906, the day appointed for the opening of the bids, American companies exclusively presented bids, and the contracts for the above-mentioned sections were awarded as follows:

Item.	To whom awarded.	Amount of bid.
Construction of dam (a) -----	Matson, Lord & Belser Company -----	\$241,510.25
Steel plates (b) -----	Henry H. Peabody & Co. -----	99,900.31
Steel pipe (c) -----	Atlantic, Gulf and Pacific Company -----	281,935.00
Tunnel (d) -----	do -----	179,987.50
Reservoir (e) -----	Matson, Lord & Belser Company -----	222,477.70
Total -----	-----	1,025,810.76

These works should be completed July 1, 1908. Their present status is as follows:

(a) Work was commenced in this section before any of the others, on July 20, and progress therein has been retarded owing to the rainy season.

(b) Delivery of materials of this section has not yet begun.

(c) At the point of intersection of the Pasig and San Juan Rivers the contracting company has established a steel-pipe factory.

(d) Work has likewise commenced in this section.

(e) Work has likewise commenced in this section.

The specifications and details of the work comprised in part 2 are already almost completed, but they will not be offered for bids until those of part 1 are very much more advanced.

The survey of the line of road and the tunnel through and whereon the piping is to be laid, as likewise of the other lands to complete the scheme for this work, has been very laborious and has occupied to a great extent the force of this department during the fiscal year just closed, owing to the needful measurements, the interviews with the owners of lands expropriated and others to be expropriated, and the many questions always arising when it is sought to acquire lands in localities where occupation appears to be the sole title alleged to prove ownership.

Upon contract with the Philippine Islands Telephone Company a telephone line has been laid, placing Manila in easy communication with these works by means of stations suitably located.

In order to secure assurance that the material to be used in the work of construction be of the kind and conditions exacted in the specifications, a contract has been entered into with the Pittsburg Testing Laboratory for the manufacturing inspection of said material.

SEWERAGE SYSTEM.

The sewerage system scheme adopted is due to Mr. O. L. Ingalls, principal assistant engineer of the department, which scheme is devised solely to carry off sewage and the impure liquid matter from dwellings, factories, stables, etc. Rain water is not to be carried off by this sewerage system; this is to be accomplished by a general system of drainage entirely independent thereof.

The purpose of the sewerage scheme as outlined is to discharge all refuse matter into the harbor at a point situated opposite the mouth of the Pasig River, and at a distance of 6,500 feet from the shore, by means of a cast-iron force main 42 inches in diameter laid below the bed of the harbor and supported by a pile foundation suitably constructed. The discharge into the bay will be accomplished by means of powerful centrifugal pumps placed at the end of Azcarraga street in a pumping station constructed for the purpose. Five additional pumping stations similar to the one described but with less powerful pumps will be required to handle the sewage in other parts of the city. These pumping stations will be distributed so that three will be located on the north and three on the south side of the Pasig River. Those stations located on the north side, including the one already mentioned on Azcarraga street, will be located at the intersection of Paz and Arranque streets and also at Iris and Plaza de Santa Ana. Those stations proposed for the south side of the river will be located at the intersections of Nueva and Herran streets, Bagumbayan and Nozaleda streets, and Herran and Nozaleda streets.

All sewage collected on the south side of the river will be conveyed to the north side for discharge into the bay by means of a double 24-inch cast-iron pipe crossing the Pasig River under water. The scheme for the construction of the work and for the furnishing of all necessary materials will be carried out by two separate contracts which shall comprise, respectively:

(1) The construction of approximately 52 miles of sewers, of which 7.5 miles will be composed of brick and concrete ranging in size from 4.75 feet in diameter to 2 by 3 feet egg-shaped sewer and laid at depths ranging from 12 to 18 feet below the surface, and 42 miles will be of terracotta pipe from 8 to 24 inches in diameter and laid at depths of from 5 to 16 feet.

In addition to this there will be one 42-inch cast-iron outfall pipe 6,500 feet in length, laid below the bed of the harbor on a pile foundation, besides one double line of 24-inch flexible-joint cast-iron pipe 650 feet in length crossing the Pasig River.

(2) The construction of the six pumping stations and also the furnishing of all pumps, engines, and other necessary equipment therefor.

The necessary plans and specifications for that portion of the work which consists in the furnishing of materials, the laying of all pipes, and other described construction were submitted to the Board for approval, and bids or proposals for doing the work were advertised on August 1, 1905, to be opened on January 12, 1906. On the opening of bids the Atlantic, Gulf and Pacific Company were found to be the lowest bidders, and contracted to do the work for \$1,631,053.20. The contractors have chosen the main pumping station on Azcarraga street as the initial point for beginning work, at which point they have already completed about 200 linear feet of sewer. This work, in accordance with the terms of the contract, should be completed by July 1, 1909.

At least two years prior to the date calculated for the determination of the sewer contract bids will be asked for the construction of the six pumping stations above referred to, and also the furnishing of all necessary pumps, engines, and other machinery therefor.

Especial attention has been given to a study of this problem during the fiscal year just closed for the purpose of ascertaining the most desirable system of engines and pumps to be used in the various pumping stations, in order that the expense for operation and maintenance may always be kept at a minimum amount. A considerable time has also been given to designing a screen chamber and a system of sewage screens which are intended for the purpose of separating and removing all bulky or floating substances from the sewage in order to prevent the clogging of the pumps or for hygienic reasons to prevent their becoming a nuisance in the waters of the bay.

Bids will be opened on September 12, 1906, for the furnishing of about 400 iron sewer gates and sluice gates, ranging in size from 8 to 20 inches in diameter, for use in the flushing and cleaning of the proposed system of sewers for the city. These gates will be introduced at all terminal man-holes and at such other points along the longer lines of sewer as will be found necessary for maintaining the system at all times in a sanitary condition.

PROBABLE COST OF THE WORK.

It would seem opportune before treating this subject to call attention to the fact that the study and execution of all plans for a system of storm-water drains have likewise been entrusted to this department and that the expense therefor is to be charged against the \$4,000,000 loan. This was agreed upon, but not without objection, for the reason that it was believed that the said \$4,000,000 loan should be devoted exclusively to defraying the expense of the water-supply and sewerage-system construction in accordance with the provisions found in Act No. 1323, and that such a liberal interpretation of the act might prove to be cause for a lack of funds for the completion of these works.

The estimate of outlay compared with the income is as follows:

INCOME.	
Amount of the loan.....	\$4,000,000
Premium at the rate of \$95,625 per million.....	382,500
Total	4,382,500
OUTLAY.	
Expense incurred up to June 30, 1906.....	380,000
Amount of contract for the water system:	
Part 1	1,025,000
Part 2	165,000
Part 3	400,000
Amount of contract for the sewer system:	
Part 1	1,631,000
Part 2	370,000
Contingent funds	150,000
Customs duties on the materials to be imported.....	100,000
Cost of inspection and supervision.....	150,000
Total	4,371,000

Comparing the total income with the outlay, a remainder of \$11,500 is shown, which demonstrates a reasonable estimate of the cost of these works when completed.

STORM-WATER DRAINS.

As hereinbefore stated, this work is in charge of this department and consists of the establishment of a system of canalization, through which the storm water will run into the sewers, which in turn will empty it into the esteros or into the Pasig River. As the street levels in the city are so varied, the drains to be built will not be uniform. Some will be U-shaped, others of the horseshoe form, and still others round in their vertical section, to suit the peculiar features of the places wherein they are to be placed. The entire plan is not yet completed, but partially completed plans have already been made for the districts of Ermita, Malate, Santa Cruz, Tondo, Binondo, and Sampaloc.

Some of these sections are now being constructed, as may be seen by the following excerpt from the report of the chief engineer of this department:

Plans and specifications were prepared and proposals invited for a drain 270 meters in length and 5 by 6 feet in section, running from the Malecon Drive, near the Legaspi Monument, through the proposed hotel site to the newly built bulkhead on the bay front. This work was built by the Atlantic, Gulf and Pacific Company, under contract, at a cost to the city of ₱29,000. Due to damage resulting from the pumping of mud by the Atlantic, Gulf and Pacific Company against this new work, it has not been accepted nor finally paid for.

Contract for the construction of a storm-water drain on Calle Santa Monica, Ermita, with laterals on adjacent streets, was entered into with Salvador Farré, the city supplying certain of the materials necessary. The total amount paid to the contractor was approximately ₱11,000. This work was completed in strict conformity with the specifications, and was in every way acceptable.

A drain was also installed in Calle Soler, Santa Cruz, by Smith & Blossom, contractors, running from the Estero de Trozo to Calle Almansa, with laterals on Calle Misericordia and Calle Almansa. This work is not entirely complete, but will relieve and place in a comparatively sanitary condition a thickly settled district of approximately 30 acres.

It has been estimated that three years will be required in which to complete all sewer work.

The introduction of a sewerage system and an increased water supply for Manila will prove a lasting benefit from a hygienic point of view and will be a most important factor in the material progress and future growth of the city. It is to be hoped also that these plans can be carried to completion at a cost not to exceed the estimate which has been placed at \$4,000,000, in which event it may be asserted that the expense incurred in making these improvements has been incomparably less than those incurred by most cities of an equal population in either Europe or America for improvements of a similar nature.

DEPARTMENT OF SANITATION AND TRANSPORTATION.

This department was created as of July 1, 1906, from a division of the department of engineering and public works, and embraces all sanitary work, street sprinkling, care of parks and public grounds and cemeteries, and all city transportation, also a large part of the transportation used by the Insular Government. Some time prior to the inauguration of this new department an arrangement was made between the Insular Government and the city whereby the city took over from the Insular Government all its light transportation, equipment, stables, and corral on Calle Cervantes at a cost of about ₱225,000, to be paid for in transportation service at certain tariff rates. A considerable part of this equipment was old and in poor condition, and in the year past much expense has been incurred in putting and keeping the vehicles in serviceable condition. That the arrangement was an exceedingly good one for the Insular Government no one can deny. At the tariff rate adopted by the committee and approved by the Governor-General it was believed that the income from the service would result in some profit to the department, but notwithstanding the fact that the department has been economically and efficiently managed, the monthly statements have frequently shown a loss, and this without reckoning interest on the investment or deterioration and loss on stock, etc. The rate for service should be materially increased. The debt to the Government for the purchase referred to has been reduced by about one-half.

Capt. J. C. Mehan, formerly city superintendent of parks, etc., was made chief of the department, and Mr. Fred M. James assistant chief.

For your further information relating to this department, we quote from the annual report of the acting chief, Mr. Fred M. James:

From 1,100 to 1,400 employees were engaged in carrying on the operations of the department, the number required varying according to the needs of the service. By making payments for services upon a daily wage basis it was found possible to reduce the cost for such services to a much lower figure than would have been possible if a force sufficiently large to meet every requirement had been maintained throughout the year.

Special attention was given to the use of supplies and materials, and every effort was made to reduce the cost to the department for equipment, tools, and expendable supplies to the lowest possible limit.

Collections were made for services in connection with pail cleaning, vault cleaning, transportation, and the rent and sale of rights at the city cemeteries, amounting in all to ₱258,104.28. The following services were rendered by the department for the benefit of the public, for which no collections were made: Street cleaning, garbage collection, maintenance of crematories, public closets, pail and vault cleaning in city buildings, improvement and maintenance of parks and public grounds.

Street cleaning.—The streets were swept at stated intervals varying from three times daily to twice weekly, according to their importance as business thoroughfares and the amount of traffic passing over them. The gutters were all scraped or flushed out and grass and weeds removed from the surface as often as was

found necessary. The grass and weeds in vacant lots and along the city walls were removed from time to time, and all material collected which could be used for the purpose was dumped into the lowlands belonging to the city. Hand carts and dump carts were used in collecting the street refuse and conveying it to a proper dumping place.

Garbage collection.—All house refuse, trade refuse, etc., was collected with carts and transported to the crematories, or, when the nature of the material would allow, to a regular dumping site and used for filling. Daily inspection was made of the beaches and the open sites around city markets, all material found at these places being collected by employees of this department and properly disposed of. Dead animals, too large to be placed in garbage receptacles, were collected by means of a wagon built for this service, and after being noted by the police department were cremated.

Collection of night soil.—The pail conservancy system has been in service long enough to prove its value as a sanitary means of disposing of night soil where other means for its disposition are wanting, and forms no small part of the sanitary work of the city.

As a protection to the water supply of the city, 150 pails were placed at convenient points along the Mariquina River above the intake at the pumping station. These pails have been cleaned daily by employees of this department.

From three to six odorless excavators have been in use every night during the past year, removing the contents of vaults from private residences and public buildings. It is not contemplated that this service in any way be reduced until the new sewer system has been completed, as it is the only means of removing night soil from many of the buildings supplied with modern sanitary appliances.

All night soil collected is carried to sea in the steam barge *Pluto*, which has now been in the service about three years. This barge is supplied with a complete equipment for cleaning and disinfecting pails and excavators, and its general arrangements are such that it has filled all the requirements made upon it to an admirable degree.

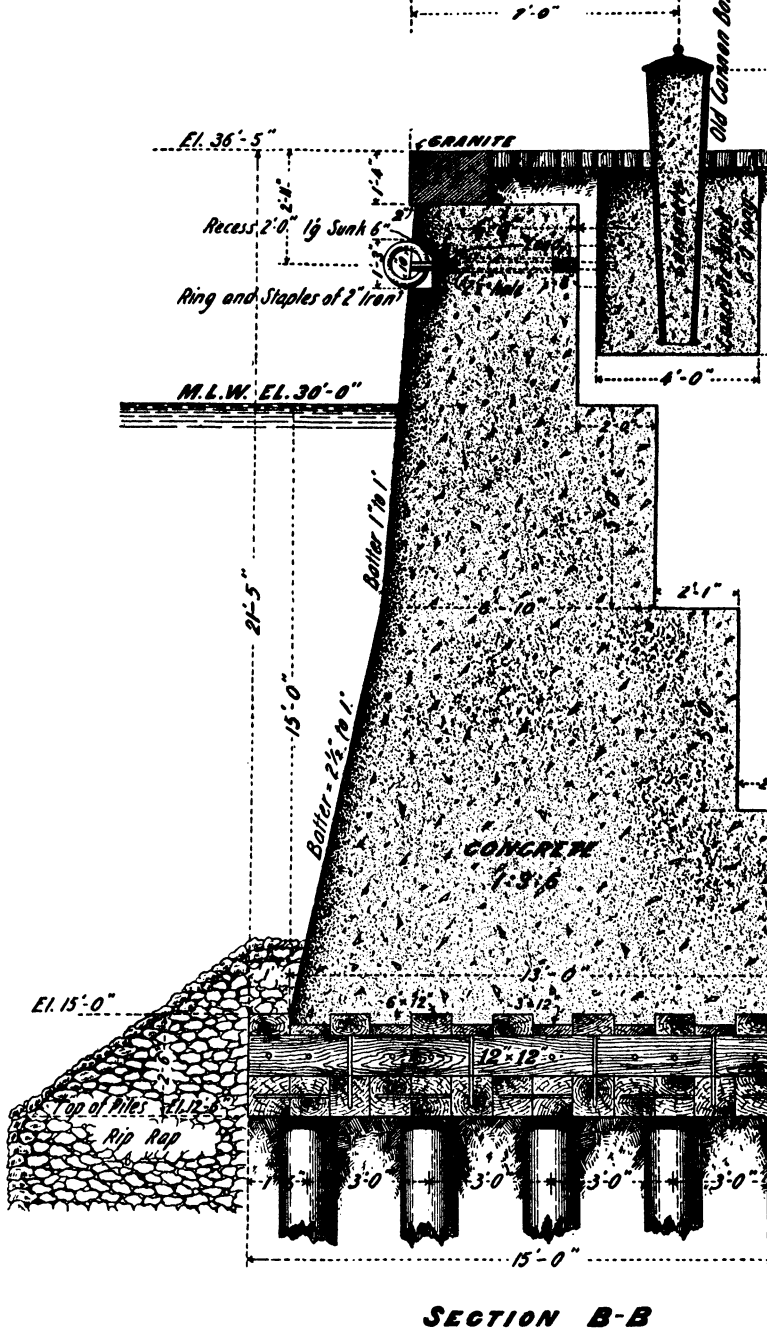
Street sprinkling.—This department is not equipped to sprinkle all the streets of the city by means of sprinkling wagons. Some streets have hydrants at close intervals which have been utilized for sprinkling, a length of hose with nozzle being used for this purpose. Sprinkling with hose does not cost as much per square meter sprinkled to this department as to sprinkle with wagons, but experience has proved that the expense to the city is greater on account of the injury to the streets and the expense of maintaining a large number of hydrants. Some places of small area are sprinkled by means of cans, this being the most feasible method of watering these sites.

Lands transportation.—The land transportation used by the various Insular Bureaus in the city of Manila and the city departments has been maintained throughout the year by this department. On June 30 there were on hand at both stables 227 American and Australian horses, 108 natives horses, 7 Chinese horses, 149 American mules, and 34 Chinese mules.

There were purchased for the use of the city stables 29 horses and 1 mule; 16 horses, 2 mules, 36 native ponies, and 4 China ponies were sold; 40 horses, 14 mules, and 1 native pony were lost by death. Surra caused the death of 11 animals at stable No. 1 during the months of December and January. As this disease had not appeared among the stock at stable No. 2, the Bureau of Agriculture was asked for assistance in locating its source. Inspection of the private stables near stable No. 1 by veterinarians from the Bureau of Agriculture resulted in the destruction of a number of private animals afflicted with the disease. Since that time the entire city has been inspected and danger of another outbreak is slight. The carromata ponies have now been in the service for several years

Code
1:2½:5

Cast washer 12" x 12" x 1" thick



SECTION B-B

PROPO

PAS

MAY 19

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Note:- Details of
Crib construction same
as for Section B-B